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SOUTH DAKOTA
Business Review

December 1987
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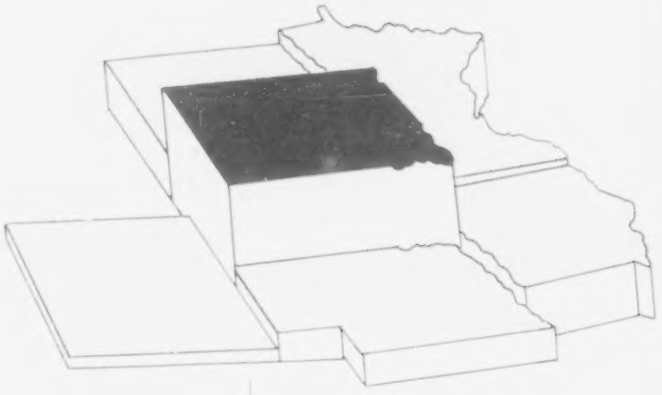

Published by Business Research Bureau, The University of South Dakota

General Indicators	Latest Quarter	SOUTH DAKOTA Latest Quarter	SOUTH DAKOTA Year Ago	SOUTH DAKOTA Percent Change	UNITED STATES Latest Quarter	UNITED STATES Year Ago	UNITED STATES Percent Change
Personal Income ($ Mil.)	1987-2	8,763	8,879	-1.3	3,705,169	3,523,766	5.1
Farm Prop. Income ($ Mil.)	1987-2	905	1,374	-34.1	45,333	48,683	-6.9
Non-ag Employment (Thous.)	1987-3	256	254	0.8	102,126	99,804	2.3
Unemployment Rate (%)	1987-3	3.8	3.7	2.7	5.8	6.8	-14.7
Total Employment (Thous.)	1987-3	344	342	0.6	114,068	111,192	2.6

Note: All U.S. data seasonally adjusted except for the unemployment rate and total employment. For South Dakota only personal income and farm proprietors' income are seasonally adjusted.

OCTOBER 19, 1987 - BLACK MONDAY CONTEMPLATIONS OF ITS EFFECT ON SOUTH DAKOTA'S ECONOMIC OUTLOOK

Joseph T. Simmons, Ph.D.

The drop in the stock market of this magnitude (36.1% from its August 1987 high to its October 19th low) has occurred 11 other times since 1885 when we exclude the world wars. During the two most recent declines (1969-70 and 1973-74), the country had a subsequent recession. The earlier crashes in this century (1901-03, 1906-07, 1919-21, 1929-32 and 1937-38) all had depressions). The writer is not predicting "history will repeat itself," but past trends cannot be ignored, and must be analyzed, for the information they can provide.

Continued on page 4

About the author: Joseph T. Simmons, Ph.D., is Professor of Finance at the School of Business, University of South Dakota, Vermillion, South Dakota.

THE SUPPORT FOR PUBLIC HIGHER EDUCATION IN SOUTH DAKOTA: A COMPARATIVE AND HISTORICAL ANALYSIS

Ralph J. Brown Ph.D.

Introduction

Higher education can be viewed as an investment in human capital. Human capital includes those human attributes such as skill, energy, and motivation combined with education and knowledge used in the production of income and accounts for more than one-half of the total wealth in the economy.[1] Economists have long realized that education enhances economic development and growth. Empirical research on economic growth indicates that the application

Continued on page 6.

About the author: Ralph J. Brown, Ph.D., is Professor of Economics at the School of Business, University of South Dakota, Vermillion, South Dakota.

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TREND OF BUSINESS

The United States Economy

Real GNP rose at a 3.8 percent annual rate during the third quarter. Contributing to this rise was increased consumer spending and gains in business-fixed investment.

U.S. total personal income rose slightly in the second quarter of 1987 compared to the previous quarter (1.2%). Farm proprietors' income for this period was down eight percent.

Unadjusted employment figures for the third quarter of 1987 rose 1.6 percent compared to the previous quarter. The unemployment rate of 5.8 percent in the third quarter of 1987 was down from the 6.2 percent rate of the previous quarter and well below the 6.8 percent rate of a year ago.

South Dakota Economy

The South Dakota employment indicators maintained by the Business Research Bureau declined on a seasonally adjusted basis in the third quarter of 1987 compared to the previous quarter. Non-agricultural employment fell slightly (−0.3%). Construction employment for this period was down 2.9 percent. The unemployment rate for SD averaged 4.5 percent in the third quarter of 1987, up slightly from the 4.0 percent rate in the second quarter. Compared to a year ago non-farm employment rose slightly (0.6%). Construction employment for this period was down nearly two percent. The unemployment rate of 4.5 percent in the third quarter of 1987 was only slightly higher than last year's third quarter rate of 4.4 percent.

Personal income fell on a seasonally adjusted basis in the second quarter of 1987 compared to the previous quarter—down nearly three percent. This decline was the result of the nearly 20 percent drop in farm income.

New car sales fell 12 percent in the third quarter of 1987 compared to the previous quarter. Third quarter sales last year were strong compared to this year as shown in the following table.

New truck sales also fell in the third quarter—down 5.5 percent from last quarter. Further comparisons are shown in the following table.

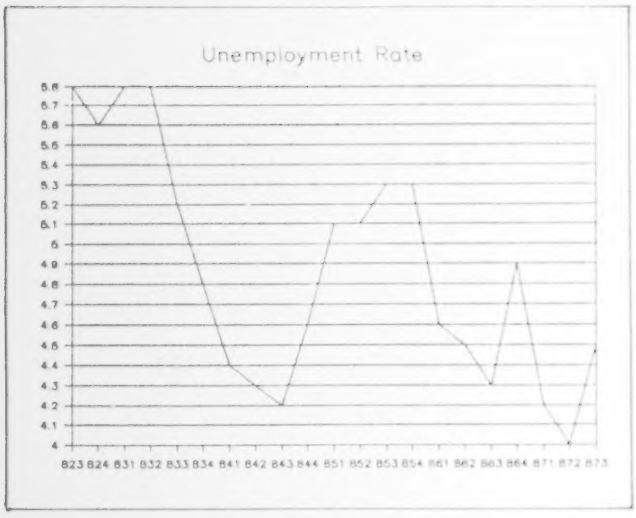
South Dakota business indicators
1986-1987
Seasonally Adjusted (1982=100)

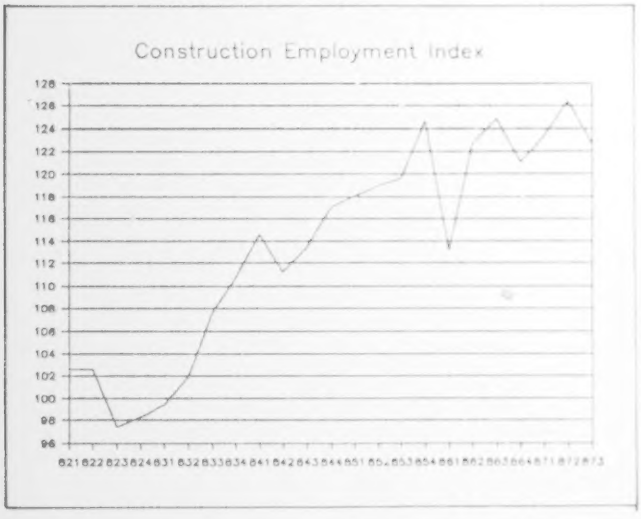
	1986 2nd qtr	1986 3rd qtr	1986 4th qtr	1987 1st qtr	1987 2nd qtr	1987 3rd qtr
Personal Income	110.8	109.1	113.2	115.8	114.8	
Farm Proprietors' Income	197.6	127.3	192.1	230.5	187.7	
Non-ag Employment	116.2	119.4	119.2	107.4	121.1	122.1
Construction Employment	122.7	128.8	123.0	123.3	126.4	122.7
Unemployment Rate (%)	4.5	4.3	4.9	4.2	4.0	4.5
New Cars	147.2	157.8	118.3	137.4	129.5	113.8
New Trucks	139.6	127.0	148.0	115.2	152.9	144.5

SOUTH DAKOTA BUSINESS & ECONOMIC INDICES

Quarterly Data 1982-1987

Adjusted for Seasonal Variation





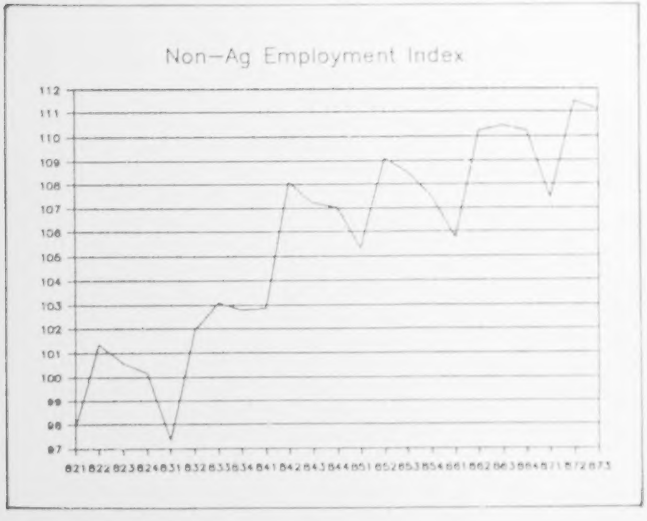


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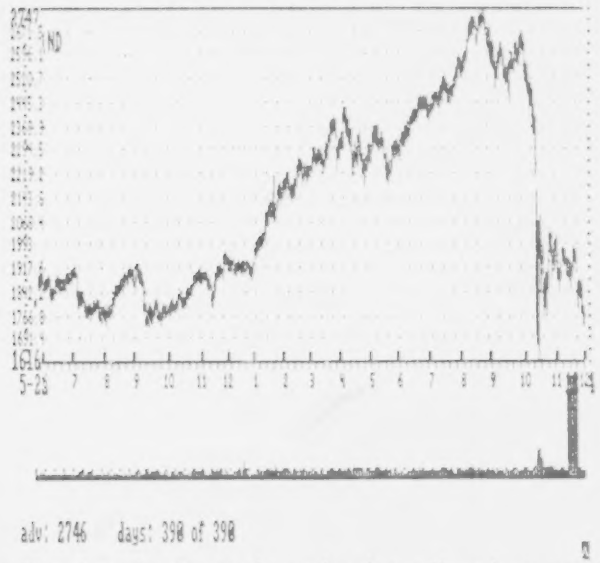
CHART I

THE DOW JONES INDUSTRIAL AVERAGE



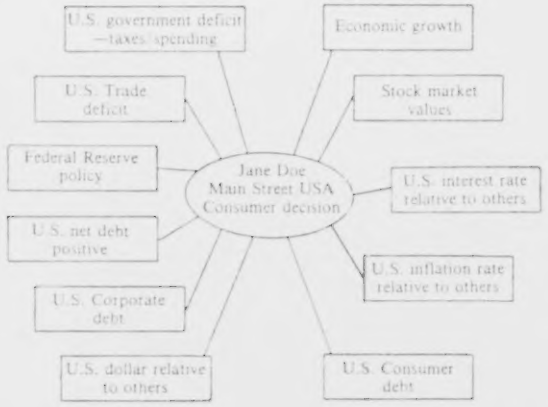
adv: 2746 days: 398 of 398

The drop in the stock market has affected consumer confidence which is generally a lead indicator of future economic activity. It has dropped 17% from its September high - but still remains above what it was a year ago.

CHART II

Chart compiled by Thomas Filandro.

To date of this writing (12/08/87) there have not been any statistics published to indicate any negative effect on economic growth. BUT have we solved our economic problems—regretfully that answer is no—and the interrelationship of them is complex and therefore of very high risk.


U.S. government deficit —taxes/spending
Economic growth
U.S. Trade deficit
Stock market values
Federal Reserve policy
Jane Doe Main Street USA Consumer decision
U.S. interest rate relative to others
U.S. net debt positive
U.S. inflation rate relative to others
U.S. Corporate debt
U.S. dollar relative to others
U.S. Consumer debt

All of the items are inter-related and changing any item has an impact on all of the others in unreliable predictable patterns.

The basic problem is our mountains of debt in every area. It is not unlike the farm situation in South Dakota a few years ago.

CHART III

Consumers-Consumer debt hit record highs in December 1985, both in absolute nominal dollars and as a percent of income. These levels have steadily climbed since then. Their savings rates have dropped and their real incomes have been dropping as pay raises have been less than inflation. At some point they will decide to decrease spending and reduce debt. As they comprise 65 percent of our total GNP that decision and the subsequent necessary reduction in production will cause a recession or, if deeper and longer, a depression.

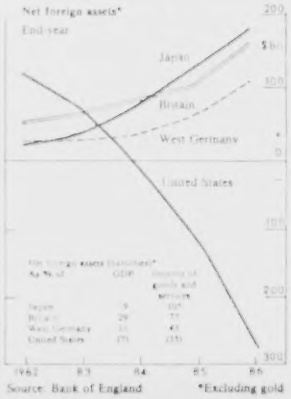
Government-Deficits and accumulated debt also continue to reach new records. The catch 22 is that historically every time taxes are increased the economy suffers enough (short-term) that receipts drop and outlays increase meaning an increase in the deficit.

We have not been able to finance our government deficit nationally, but have borrowed about 50 percent in recent years from foreign sources.

U.S. Net liability position

In 1982, U.S., investors had a net investment position of over $100 billion on which we received interest and dividends. On December 31, 1986, we had a net liability position of $300 billion on which we have to pay interest and dividends. That swing was caused by the trade deficit.

CHART IV



Source: Bank of England *Excluding gold

Trade Deficit

We continue to buy more than we sell (averaging about $15 billion a month this year). November was a new record at $17.34 billion. That net export of dollars is going to be held by foreign investors, much of it being reinvested in U.S. assets, which then increases our future payments of interest and dividends which increases our total deficit, etc.

Solutions to the trade deficit are limited to: a) increased exports b) decreased imports 3) a combination of a and b.

As the U.S. represents a phenomenal 30 percent of world wide total consumption and the majority of discretionary consumption we have to ask to whom are we going to export? For humanitarian and political reasons we have exported our agricultural technology and our former customers now have surpluses and are our competitors for a smaller market.

In manufactured products we have to drop the value of the dollar to make our goods less expensive overseas and our imports more expensive, reducing them—but—to whom do we sell? The developing countries from whom we are increasing our imports still have very low wages, and their currencies are purposefully more closely tied to ours. As we decrease our imports their economies enter recessions which makes it unlikely they will buy more from us.

Value of U.S. Dollars

This has an effect on imports and exports. Currently the Federal Reserve Board has a policy of stabilization. To accomplish this means upward pressure on interest rates to draw capital investment in. Conversely the dollars rapid fall also pressures interest rates because foreign investors want to escape a currency loss and our inflation rate goes up. The inflation rate rises because imported goods rise in price and the value of precious metals (internationally traded) also rises.

It has been reported in the financial press that many Japanese banks on paper are broke because of investments in U.S. government bonds. That's only if they sell. The reasons come from two variables.

A year ago U.S. 20-year governments had a yield of 7.3 percent. Today they are 9.3. If an investor sold a $1,000 bond today it would only bring $800 because of the rise in interest rates. The Japanese investors bought the bond when $1 U.S. = 165 yen. Today the yen is 133 so they would receive 32 less yen per dollar or 20 percent. Total value dropped from 1,000 to 640 or a 36-percent loss.

That's why when Germany and Japan raised their interest rates ours went up also and when our treasury secretary told West Germany's finance minister he was going to let the dollar fall, our interest rates sharply rose to 10.36 percent on the day of the market crash.

TABLE I

RELATIVE INTEREST AND INFLATION RATES

	Trade balance* $bn		Bond Yields		Consumer Prices*	
	latest month	latest 12 months	Gov't Long-term	Corporate	3 mths	1 year
Australia	+0.14 Aug	-.9	13.85	14.85	+6.2	+9.3 May
Belgium	+0.33 Jul	+ 1	8.48	8.48	+1.8	+1.7 Oct
Canada	+0.68 Aug	+8.5	10.05	10.68	+4.7	+4.5 Sep
France	-0.40 Sep	-3.6	10.46	11.47	+2.8	+3.5 Aug
W. Germany	+4.88 Aug	+60.7	6.55	6.25	nil	+0.5 Sep
Holland	+0.01 Jul	+1.9	7.12	7.53	+0.8	+0.2 Sep
Italy	-0.99 Aug	-5.7	11.34	10.93	+4.3	+5.0 Sep
Japan	+6.77 Aug	+99.9	5.05	5.79	+0.3	+0.8 Aug
Spain	-1.20 Aug	-12.4	12.88	13.23	+5.1	+4.4 Sep
Sweden	+0.11 Sep	+3.9	11.69	12.78	+7.3	+5.0 Sep
Switzerland	+0.14 Aug	-5.7	4.40	4.78	+1.1	+1.6 Sep
UK	-1.08 Sep	-14.3	9.77	11.22	+8.9	+4.2 Sep
USA	-15.68 Aug	-161.5	9.11	10.29	+4.6	+4.3 Sep

* Australia, France, Canada, Japan, and UK imports fob, exports fob. All others cif/fob.

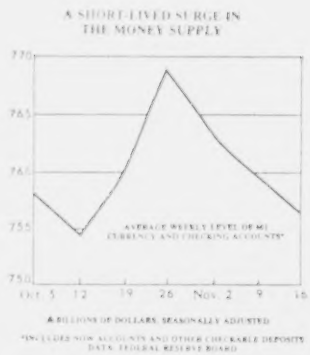
+ Hourly wage rates in manufacturing except Australia, weekly earnings; Japan, and Switzerland, monthly earnings; Belgium, Canada, Sweden and USA, hourly earnings; UK, monthly earnings for all employees.

Source: The Economist, October 31, 1987

Federal Reserve Policy

Many credit Greenspan with averting a financial crisis by injecting major liquidity into the system. Since October 19th he has become more restrictive and money supply is back to the levels of the pre-crash. In the writers opinion given the fragility of the system this is not the appropriate policy.

CHART V



South Dakota's farm economy has stopped its decline and had a slight rebound. Land prices posted their first advance in over five years in the last quarter and most analysts believe prices of land have bottomed out. The three potential variables which would have the greatest impact are all subject to political action and therefore impossible to predict. These include 1) rising interest rates; 2) political reductions in farm programs; and 3) an oil import tax which would increase the costs of production.

South Dakota's susceptibility for economic loss is greatest in tourism (discretionary purchase) followed by wholesaling and retailing. This would directly and immediately impact sales tax receipts and government activity and then impact a greater and greater amount of our economy.

All long-term solutions have costs to pay for the excess we have consumed over time.

1) The best--in the writer's opinion--is a reduction (gradual) in our standard of living in the U.S. to satisfy our obligations. According to some writers this would take 40 years of a zero increase in our standard of living.
2) A potentially politically expedient solution would be to increase inflation to make the debt outstanding a smaller percent of our capacity. Under current conditions this would cause the dollar to fall and have a high probability of causing a worldwide depression.
3) Some economists are predicting a depression—vast bankruptcies, financial reorganization, and restructuring (comparable to what our economy has experienced in the 1980's.) The degree and extent of a depression is not predictable.
4) Stagflation/Stagdepression—a combination of two and three (above) of a degree comparable to or greater than 1974-75.

An optimal solution could be probably generated by an extensive computer simulation. The problem is it cannot predict human reaction. Our fate lies in the hands of the reactions of the finance ministers of our trading partners (principally Japan and Germany) and ultimately with the U.S. consumer—to purchase or not to purchase. The risks are high and the short-term outcome uncertain. However, interest rates are most likely to continue the fall they started in 1982. Long-term the writer is confident we will persevere, our country and its human resources always have and despite some significant pain will again.

Continued from page 1.

of "advances in knowledge" and "improvements in education per worker" together account for more than one-half of the economic growth that occurred over the 1929-1982 period.[2]

Education also provides important individual benefits. Research on education as an investment indicates that inflation-adjusted private rates of return to investment in higher education are in the 9 to 14 percent range.[3] Social rates of return to higher education are estimated at 7 to 12 percent. These inflation-adjusted rates of return compare very favorably with the historical rates of return on such investments as bonds or common stocks.

Only recently has there been much systematic research on the role of public expenditures on higher education and economic growth. Several studies indicate that while high state and local taxes may deter economic growth in a particular state, expenditures on growth-enhancing items such as public higher education greatly outweigh the detrimental effect of any taxes required to finance the expenditures.[4] Realizing the beneficial effects of a well-financed public higher education system, many states are taking steps to upgrade their colleges and universities.

Studies by the U.S. Department of Labor about the workforce needs to the year 2000, indicate that the fastest growing job categories will be those requiring more education.[5] Furthermore, they project that over the 1984-2000 period more than 50 percent of the new jobs will require at least some college. They expect that 30 percent of all the new jobs created during this time period will require four or more years of college, while today only 22 percent of the jobs require this amount of education.

This study examines the level of state and local support for public higher education in South Dakota compared to the other 49 states for the 1986-87 academic year. In addition, trends of support for public higher education in South Dakota since 1979 are examined.

State Support for Higher Education

A state's support for public higher education includes state and local appropriations and tuition. For the purposes of this study, public higher education appropriations by state and local governments include funds appropriated for current operating education expenses of institutions of higher education. Such expenses will normally include administrative services, campus services, library functions, and maintenance of facilities on campus. Appropriations data presented in this study do not include appropriations for research, agriculture, public health care services, and medical schools. Exclusion of these expenditure items provides a more accurate picture of a state's expenditures on the **student-related** higher educational functions listed above. Net tuition revenues are tuition revenues less state appropriated financial aid and tuition waived.

Since the number of full-time-equivalent (FTE) students is a basic measure of load requirements of the higher education system, all data is presented as appropriations or tuition per FTE. Table A presents state and local appropriations per FTE, state rankings and percentiles for each of the 50 states and the U.S. for the 1986-87 academic year. South Dakota fell below the national average in appropriations per FTE with appropriations of $2,601 per student. South Dakota ranked 47th in the nation or 67 percent of the U.S. average of $3,871 per FTE. Nebraska ranked 46th at 68 percent of the national average.

Table B presents tuition per FTE, state rankings and percentile for each of the 50 states and the U.S. Tuition per FTE was $1,163 for the nation—the same as South Dakota, which ranked 27th. Vermont ranked first with $3,877 per FTE and other high ranking states were New Hampshire, Delaware, and Pennsylvania. Low ranking states were North Carolina, Idaho, and California.

The data presented in Tables A and B represents the raw data on appropriations and tuition per FTE without any adjustment for important state-by-state differences. These differences relate to types of educational systems, cost-of-living, and per capita disposable personal income between states. For instance, differences in appropriations or tuition reflect differences in the types of educational institutions in each state. States with a high proportion of students enrolled in major research universities tend to have higher appropriations and tuition than a state with a high proportion of students enrolled in two-year colleges. Also, differences in appropriations and tuition reflect differences in the cost-of-living between states. To fund public higher education at an adequate level in high cost-of-living states naturally requires greater appropriations, while the opposite is true in low cost-of-living states. Finally, differences in appropriations and tuition reflect differences in the ability to finance public services due to differences in income or tax capacity. To make more meaningful comparisons, raw appropriations and tuition data were adjusted by indexes of system support requirements, cost-of-living, and per capital disposable income.

TABLE A

STATE AND LOCAL APPROPRIATIONS FOR PUBLIC HIGHER EDUCATION PER FTE, 1986-87

STATE	$ PER FTE	INDEX (US=100)	RANK	STATE	$ PER FTE	INDEX (US=100)	RANK
UNITED STATES	$3,871	100					
ALABAMA	3,075	79	31	MONTANA	3,351	86	35
ALASKA	9,643	249	1	NEBRASKA	2,617	68	46
ARIZONA	3,493	90	22	NEVADA	4,122	106	15
ARKANSAS	3,830	99	19	NEW HAMPSHIRE	2,804	72	43
CALIFORNIA	4,007	103	7	NEW JERSEY	5,157	133	5
COLORADO	2,875	74	44	NEW MEXICO	4,159	107	14
CONNECTICUT	5,170	133	6	NEW YORK	5,892	152	4
DELAWARE	4,114	106	16	NORTH CAROLINA	3,441	89	29
FLORIDA	3,147	81	30	NORTH DAKOTA	3,145	81	39
GEORGIA	4,256	110	11	OHIO	3,134	81	37
HAWAII	7,470	193	2	OKLAHOMA	2,586	67	48
IDAHO	3,014	78	36	OREGON	3,511	91	34
ILLINOIS	3,581	92	28	PENNSYLVANIA	3,955	102	24
INDIANA	3,601	93	27	RHODE ISLAND	3,442	101	17
IOWA	3,501	90	21	SOUTH CAROLINA	4,008	104	8
KANSAS	3,207	83	33	SOUTH DAKOTA	2,601	67	47
KENTUCKY	3,411	88	25	TENNESSEE	4,193	108	10
LOUISIANA	3,705	96	20	TEXAS	3,041	79	40
MAINE	4,430	114	9	UTAH	3,857	100	18
MARYLAND	4,445	115	12	VERMONT	2,003	52	49
MASSACHUSETTS	4,015	104	13	VIRGINIA	3,612	93	23
MICHIGAN	3,611	93	26	WASHINGTON	3,557	92	32
MINNESOTA	3,611	93	31	WEST VIRGINIA	2,355	75	42
MISSISSIPPI	2,858	74	45	WISCONSIN	3,679	95	22
MISSOURI	3,359	87	38	WYOMING	6,826	176	3

Source: Kent, Hallerud, "State Profiles - Financing Public Higher Education 1979-80 to 1986-87," Washington, D. C.: Research Associates of Washington, July, 1987.

TABLE B

NET TUITION REVENUE FOR PUBLIC HIGHER EDUCATION PER FTE, 1986-87

STATE	$ PER FTE	INDEX (US=100)	RANK	STATE	$ PER FTE	INDEX (US=100)	RANK
UNITED STATES	$1,163	100					
ALABAMA	1,027	88	30	MONTANA	928	80	40
ALASKA	1,235	106	22	NEBRASKA	1,178	101	31
ARIZONA	929	80	39	NEVADA	1,080	93	32
ARKANSAS	1,351	116	14	NEW HAMPSHIRE	2,178	272	2
CALIFORNIA	697	60	50	NEW JERSEY	1,837	158	9
COLORADO	1,020	88	31	NEW MEXICO	724	62	45
CONNECTICUT	1,397	120	19	NEW YORK	1,049	90	35
DELAWARE	2,004	172	3	NORTH CAROLINA	614	53	48
FLORIDA	779	67	44	NORTH DAKOTA	1,235	106	24
GEORGIA	1,240	107	23	OHIO	1,775	149	8
HAWAII	836	72	43	OKLAHOMA	830	55	46
IDAHO	812	70	46	OREGON	1,211	104	25
ILLINOIS	1,410	121	18	PENNSYLVANIA	2,371	204	4
INDIANA	1,277	110	29	RHODE ISLAND	1,598	137	10
IOWA	1,514	130	17	SOUTH CAROLINA	1,541	133	13
KANSAS	1,159	99	28	SOUTH DAKOTA	1,163	100	27
KENTUCKY	1,154	99	26	TENNESSEE	1,375	118	16
LOUISIANA	1,403	121	15	TEXAS	821	71	42
MAINE	1,611	138	11	UTAH	1,036	89	33
MARYLAND	1,800	155	10	VERMONT	3,877	333	1
MASSACHUSETTS	997	86	34	VIRGINIA	1,483	128	12
MICHIGAN	1,090	94	36	WASHINGTON	1,021	88	37
MINNESOTA	1,144	98	27	WEST VIRGINIA	1,143	98	29
MISSISSIPPI	1,114	111	21	WISCONSIN	1,359	134	12
MISSOURI	1,356	117	20	WYOMING	784	68	43

Source: Kent, Hallerud, "State Profiles - Financing Public Higher Education 1979-80 to 1986-87," Washington, D. C.: Research Associates of Washington, July, 1987.

Adjusted appropriations per FTE for the 50 states are presented in Table C. As shown in this table, South Dakota appropriated $3,270 per FTE as compared to the U.S. average of $3,871 per FTE. South Dakota ranked 45th and was 84 percent of the U.S. average. Stated in another way, South Dakota funds public higher education at a level which is 16 percent below the U.S. average. Once again, it must be emphasized that this is after adjustment for differences in system support requirements, cost-of-living, and per capita disposable personal income. After making the same adjustments to tuition per FTE, (see Table D), the adjusted tuition was $1,434 per FTE as compared to $1,163 per FTE at the U.S. level. Based on this data, South Dakota is charging its students 23 percent above the national average after adjustments for differences in support requirements, cost-of-living, and per capita disposable personal income.

TABLE C

ADJUSTED* STATE AND LOCAL APPROPRIATIONS FOR PUBLIC HIGHER EDUCATION PER FTE, 1986-87

STATE	S&L APPROP. PER FTE	INDEX US=100	RANK	STATE	S&L APPROP. PER FTE	INDEX US=100	RANK
UNITED STATES	$3,871	100					
ALABAMA	3,726	96	28	MONTANA	4,149	107	18
ALASKA	6,358	164	2	NEBRASKA	2,752	71	47
ARIZONA	3,802	98	24	NEVADA	4,249	110	16
ARKANSAS	4,750	123	11	NEW HAMPSHIRE	2,457	63	49
CALIFORNIA	4,241	110	17	NEW JERSEY	3,948	102	19
COLORADO	2,524	65	48	NEW MEXICO	4,723	122	13
CONNECTICUT	3,723	96	29	NEW YORK	4,956	128	9
DELAWARE	3,672	95	31	NORTH CAROLINA	5,172	134	8
FLORIDA	3,509	91	35	NORTH DAKOTA	3,892	101	21
GEORGIA	5,285	137	7	OHIO	3,299	85	43
HAWAII	5,853	151	5	OKLAHOMA	3,308	85	42
IDAHO	4,906	127	10	OREGON	3,850	99	22
ILLINOIS	3,408	88	40	PENNSYLVANIA	3,570	92	34
INDIANA	3,821	99	23	RHODE ISLAND	3,150	81	39
IOWA	3,664	95	32	SOUTH CAROLINA	6,043	156	3
KANSAS	3,279	85	44	SOUTH DAKOTA	3,270	84	45
KENTUCKY	4,581	118	15	TENNESSEE	5,908	153	4
LOUISIANA	3,965	101	20	TEXAS	3,490	90	37
MAINE	5,560	144	6	UTAH	4,611	119	14
MARYLAND	3,137	81	46	VERMONT	1,975	51	50
MASSACHUSETTS	3,506	91	36	VIRGINIA	3,730	96	27
MICHIGAN	3,371	87	41	WASHINGTON	3,422	88	38
MINNESOTA	3,606	93	33	WEST VIRGINIA	3,733	96	26
MISSISSIPPI	4,739	122	12	WISCONSIN	3,675	95	30
MISSOURI	3,790	98	25	WYOMING	7,876	203	1

* Adjusted for system support financial requirements index, geographic price index, and per capita disposable personal income.

TABLE D

ADJUSTED* NET TUITION REVENUE FOR PUBLIC HIGHER EDUCATION PER FTE, 1986-87

STATE	NET TUITION PER FTE	INDEX US=100	RANK	STATE	NET TUITION PER FTE	INDEX US=100	RANK
UNITED STATES	$1,163	100					
ALABAMA	1,261	108	28	MONTANA	1,170	101	30
ALASKA	819	70	46	NEBRASKA	1,140	98	31
ARIZONA	980	84	37	NEVADA	1,113	96	33
ARKANSAS	1,425	123	24	NEW HAMPSHIRE	3,227	292	2
CALIFORNIA	452	39	50	NEW JERSEY	1,323	114	26
COLORADO	1,677	144	13	NEW MEXICO	821	71	45
CONNECTICUT	1,007	87	35	NEW YORK	897	77	40
DELAWARE	2,575	221	3	NORTH CAROLINA	844	73	42
FLORIDA	869	75	41	NORTH DAKOTA	1,427	123	23
GEORGIA	1,524	131	16	OHIO	1,732	149	12
HAWAII	477	41	49	OKLAHOMA	826	71	44
IDAHO	754	65	48	OREGON	1,337	115	25
ILLINOIS	808	69	47	PENNSYLVANIA	2,213	190	5
INDIANA	1,783	153	10	RHODE ISLAND	1,443	124	21
IOWA	1,629	139	14	SOUTH CAROLINA	2,146	185	6
KANSAS	1,114	96	32	SOUTH DAKOTA	1,434	123	22
KENTUCKY	1,520	131	17	TENNESSEE	1,808	155	8
LOUISIANA	1,802	155	9	TEXAS	945	81	38
MAINE	1,920	165	7	UTAH	1,261	108	29
MARYLAND	1,297	112	27	VERMONT	4,538	390	1
MASSACHUSETTS	827	71	43	VIRGINIA	1,492	128	19
MICHIGAN	1,745	150	11	WASHINGTON	939	80	36
MINNESOTA	1,096	94	34	WEST VIRGINIA	1,585	136	20
MISSISSIPPI	2,250	193	4	WISCONSIN	1,571	135	15
MISSOURI	1,515	130	18	WYOMING	943	81	39

* Adjusted for system support financial requirements index, geographic price index, and per capita disposable personal income.

Per capita disposable personal income is only one measure of a state's ability to fund public expenditures. Tax capacity is frequently used as an alternative measure of a state's ability to obtain revenues for public purposes. Adjustment of the appropriations and tuition data by system support requirements, cost-of-living, and tax capacity per capita yielded results similar to those using per capita personal income. Adjusted (tax capacity) appropriations per FTE in South Dakota were 13 percent below the national average, while adjusted tuition per FTE in South Dakota was 26 percent above the national average.

Consequently, regardless of which measure of a state's ability to fund public expenditures appropriations per FTE is used the conclusion is the same. That is: When adjustments for system support requirements, cost-of-living, and ability to finance public expenditures (income or tax capacity) are made, South Dakota appropriations per FTE are 13 to 16 percent below the U.S. average.

Historical Trends

In this section , historical trends of support for public higher education in South Dakota are examined and compared with the U.S. and eight regional states. The time period analyzed is the academic years of 1979-80 through 1986-87. The 1979-80 academic year serves as the initial year because it is the first year in which continuous comparative data is available for all states and the U.S. The 1979-80 academic year is also an appropriate beginning year for the analysis since it was the peak year of the business cycle in both South Dakota and the U.S., and it was the peak year in inflation-adjusted higher education appropriations in many states.

Table E shows the data for higher education appropriations and tuition per FTE deflated by the Higher Education Price Index.[6] From 1979 to 1986, real state and local appropriations in South Dakota decreased from $2,191 per FTE to $1,549. This is a decline of 29 percent. Real net tuition revenue per FTE in South Dakota almost kept up with inflation by falling only two percent in real terms.

TABLE E

SUPPORT FOR PUBLIC HIGHER EDUCATION IN SOUTH DAKOTA DEFLATED BY THE HIGHER EDUCATION PRICE INDEX

Academic Year	S&L Approp Per FTE (deflated)	Tuition Per FTE (deflated)
1979-80	$2,191	$ 707
1980-81	1,760	691
1981-82	1,702	674
1982-83	1,550	673
1983-84	1,436	711
1984-85	1,461	698
1985-86	1,630	692
1986-87	1,549	693

Source: S.D. Board of Regents and Research Associates of Washington.

Real state and local appropriations per FTE are the result of two variables. These variables are real tax revenues per FTE and the percentage of these taxes distributed to higher education. This can be stated as follows:

Real S & L Appropriations =	Real Tax Revenue X	Percent of Tax Revenue Allocated To Higher Education
Per FTE	Per FTE	

Continued on page 8.

Continued from page 7.

As this equation indicates, changes in real FTE state and local appropriations result from changes in real tax revenue per FTE and/or changes in the percent of tax revenue allocated to higher education. In South Dakota, local governments do not appropriate funds for higher education so the discussion will continue in the context of state government appropriations only. The real state tax revenue per FTE reflects changes in the state's economic conditions and changes in the state's tax capacity due to changes in the tax structure, i.e., new taxes or changes in tax rates. The percent of real tax revenue assigned to higher education reflects decisions by policymakers over the distribution of the state's tax revenue to higher education.

The data presented in Table F demonstrates that both of these forces account for changes in appropriations in the 1980's. From 1979 to 1982, real state revenue per FTE declined by 12.2 percent, dropping from $17,114 to $15,018. This drop in state tax revenue per FTE reflects an increase in student enrollment and a declining state economy. From 1982 to 1986, real state tax revenue per FTE increased to $21,470. This is an increase over 1979 levels by 26 percent. Therefore, the drop in public higher education appropriations between 1979 and 1986 cannot be attributed to a drop in overall tax revenue per FTE. This means that the drop in appropriations occurred because of a drop in the percentage of the state tax revenues allocated to public higher education.

TABLE F

STATE TAX REVENUE AND
HIGHER EDUCATION APPROPRIATIONS

Fiscal Year	State Tax Revenue	Real State Tax Revenue*	Real State Tax Revenue Per FTE	Percent of Real State Tax Revenue to H.E.
1979-80	$245.5 mil	$314.7 mil	$17,114	12.80%
1980-81	297.8	344.7	16,756	10.50
1981-82	328.8	348.7	16,151	10.54
1982-83	324.1	324.1	15,018	10.32
1983-84	358.8	353.8	17,297	8.26
1984-85	355.5	337.0	17,429	8.38
1985-86	403.7	374.1	20,632	7.31
1986-87	512.0	382.2	21,470	7.22

Source: U.S. Department of Commerce, State Government Finances.
* Deflated by State and Local Governments Price Deflator.

As shown in Table F, the percent of real state tax revenue distributed to higher education declined from a high of 12.80 percent in 1979 to a low of 7.22 percent in 1986. This is a reduction in the proportion of real state tax revenue distributed to higher education of 44 percent. This analysis shows that over the 1979-86 time period, the drop in FTE state appropriations was not due to a decrease in real FTE tax revenue. Rather, it reflects a shift in priorities by state policymakers, resulting in lower state support for public higher education.

Is this trend of decreasing support for higher education part of a national or regional trend? Support for public higher education data was examined for the nation and eight regional states deemed comparable to the South Dakota economy. The states used for comparison include Idaho, Iowa, Kansas, Minnesota, Montana, Nebraska, North Dakota, and Wyoming. Obviously, none of these states are identical to South Dakota, but each has some important similarities. Some of the comparison states are heavily dependent upon agriculture. Others are low population states, while others share many of the same economic influences that affect South Dakota.

To simplify the presentation, all the data presented in this section was indexed, with the 1979 value equal to 100. The annual values are then expressed relative to the 1979 value.

Table G shows the level of FTE public higher education appropriations for each of the 50 states between 1979 and 1986. The level of inflation-adjusted FTE appropriations for public higher education in South Dakota fell from an index of 100 in 1979 to 66 in 1983, rising back to 71 in 1986. In other words, the level of real FTE appropriations fell by 29 percent between 1979 and 1986. This reduction in real appropriations per FTE is the sharpest of all the states in the Union. At the U.S. level the index of FTE appropriations fell in the early 1980's, but rose again in the mid-1980's, so by 1986 real appropriations level was 97 percent of the 1979 level. In the comparison states, Nebraska also suffered a sharp reduction in inflation-adjusted appropriations per FTE. By 1986 the index fell to 72–28 percent below the 1979 level. Nebraska had the second sharpest drop in appropriations per FTE. Other states suffering reductions in real appropriations were Idaho, Kansas, Iowa, Minnesota, and Montana. North Dakota kept their levels of real FTE appropriations near or above the 1979 level, while Wyoming showed a seven percent growth.

TABLE G

INDEX OF REAL STATE AND LOCAL APPROPRIATIONS PER FTE
FOR HIGHER EDUCATION IN SOUTH DAKOTA AND OTHER STATES
(1979 = 100)

ACADEMIC YEAR	STATE SD	KS	IA	ID	MN	MT	ND	NE	WY	US
1979-80	100	100	100	100	100	100	100	100	100	100
1980-81	80	100	98	97	86	94	97	98	118	96
1981-82	78	92	92	86	81	104	103	96	118	93
1982-83	71	86	93	79	79	106	92	84	118	88
1983-84	66	83	84	81	82	104	81	83	102	89
1984-85	67	91	89	88	87	114	86	83	93	98
1985-86	71	92	89	89	87	96	85	78	110	98
1986-87	71	82	83	80	85	89	98	72	107	97

Table H presents the level of inflation-adjusted tuition per FTE since 1979. Inflation-adjusted tuition levels in South Dakota have held fairly constant over the 1979-1986 time period. At the U.S. level, real tuition levels have increased by about 12 percent over 1979 levels. Only two peer states—Idaho and Wyoming—have allowed real tuition levels to drop dramatically. Iowa, Minnesota, and North Dakota have all raised their real tuition levels considerably, while in South Dakota it fell by only two percent.

TABLE H

INDEX OF REAL TUITION PER FTE FOR HIGHER
EDUCATION IN SOUTH DAKOTA AND OTHER STATES
(1979 = 100)

ACADEMIC YEAR	STATE SD	KS	IA	ID	MN	MT	ND	NE	WY	US
1979-80	100	100	100	100	100	100	100	100	100	100
1980-81	98	91	95	97	96	91	97	98	103	100
1981-82	95	84	96	85	96	80	111	99	99	100
1982-83	95	80	101	79	107	71	99	95	100	101
1983-84	101	86	102	81	112	86	100	96	90	107
1984-85	99	86	113	88	124	97	102	92	68	111
1985-86	98	91	111	88	123	93	105	89	70	112
1986-87	98	94	113	73	110	98	112	91	77	112

Conclusions

Overall, the data is clear, state appropriations per FTE

for public higher education in South Dakota are well below the national average, 16 percent, even after adjustment for differences in system support requirements, cost-of-living, and per capita disposable income. Conversely, after making these same adjustments, tuition per FTE in South Dakota is well above the national average. Finally, the trends of real dollar support for public higher education have shown a substantial decrease since 1979. State appropriations have declined by 29 percent in real terms since 1979 and real tuition declined by two percent.

[1] U.S. Congress, Joint Economic Committee, **Economic Growth and Total Capital Formation** (Washington, D.C.: U.S. Government Printing Office, 1976); John W. Kendrick, **The Formation and Stocks of Total Capital** (New York: National Bureau of Economic Research, 1976); and Theodore W. Schultz, **Investing in People** (Berkeley, Calif.: University of California Press, 1981).

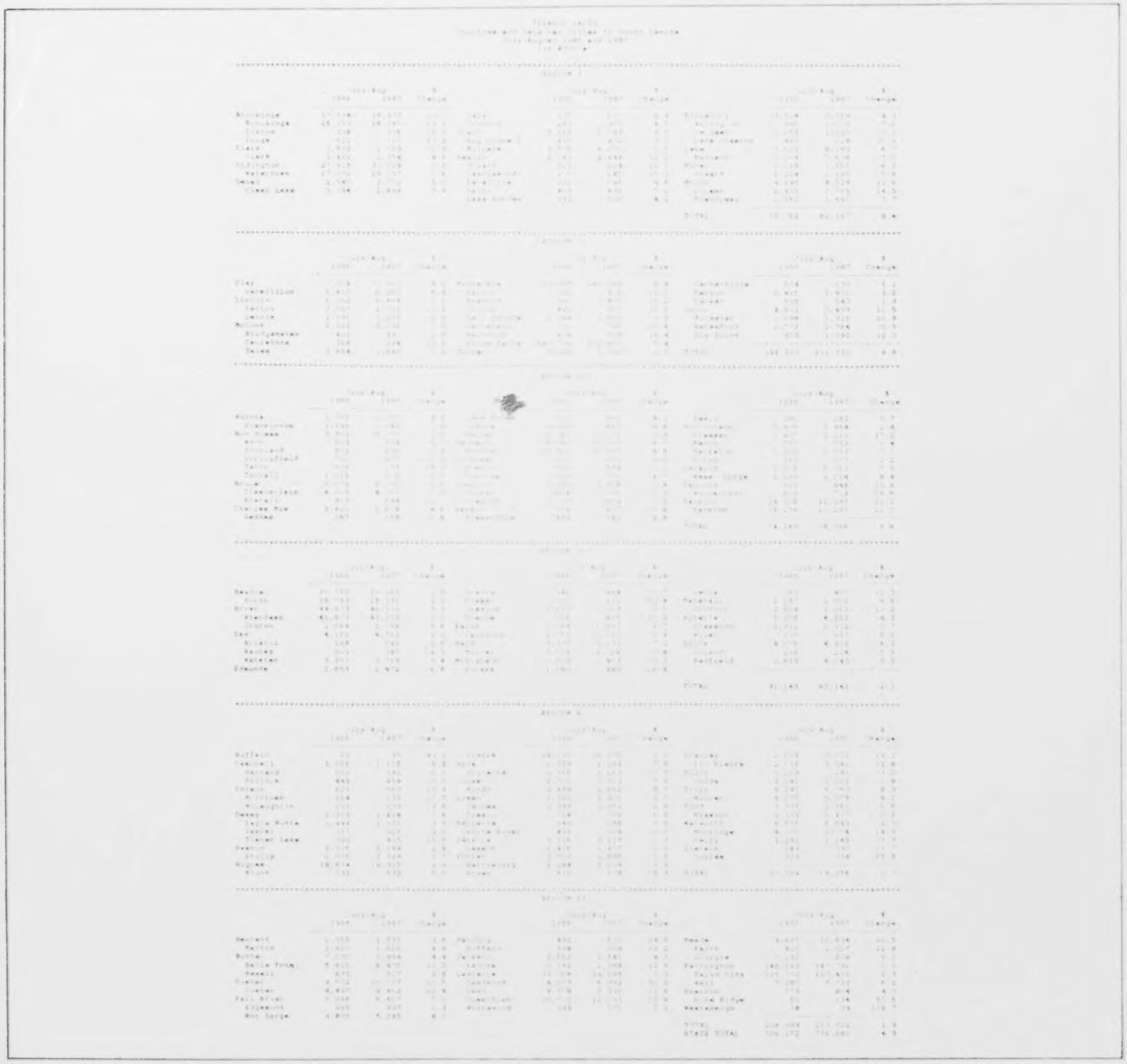
[2] Edward F. Denison, **Trends in American Economic Growth, 1929-1982** (Washington, D.C.: Brookings Institution, 1985), pp. 29-31.

[3] Howard R. Bowen, **Investment in Learning** (San Francisco: Jossey-Bass, Inc., 1977), pp. 359-387.

[4] L. Jay Helms, "The Effect of State and Local Taxes on Economic Growth: A Time Series-Cross Section Approach," **Review of Economics and Statistics** (November 1985), Vol. 67, No. 4, pp. 574-582.

[5] See articles by Ronald E. Kutscher, "Overview and Implications of the Projections to 2000"; Norman C. Saunders, "Economic Projections to the Year 2000"; Howard N. Fullerton, Jr., "Labor Force Projections: 1986 to 2000"; Valerie A. Personick, "Industry Output and Employment Through the End of the Century"; and G.T. Silvestri and J.M. Lukasiewicz, "A Look at Occupational Employment Trends to the Year 2000." These five articles are contained in the **Monthly Labor Review**, Vol. 110, No. 9, September, 1987. Also see William B. Johnston, **Workforce 2000: Work and Workers for the 21st Century** (Indianapolis, IN: Hudson Institute, June 1987), p. viii.

[6] See Kent Halstead, **Higher Education Prices and Price Indexes: 1987 Update** (Washington, D.C.: Research Associates of Washington, September 1987).



SOUTH DAKOTA INCOME AND EMPLOYMENT

TOTAL PERSONAL INCOME
United States, Plains Region and States
Second Quarter 1986 - Second Quarter 1987
(Millions of Dollars, Seasonally Adjusted at Annual Rates)

	1986			1987		% Change
	2nd Qtr.	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	2nd Qtr. 1986 2nd Qtr. 1987
United States	3,523,766	3,548,335	3,590,277	3,660,342	3,705,169	5.2
Plains States	251,570	245,276	249,647	259,431	256,233	1.9
Iowa	39,830	38,062	37,855	42,066	39,276	-1.4
Kansas	36,211	36,114	37,233	37,241	37,458	3.4
Minnesota	64,141	63,307	64,013	65,897	65,787	2.6
Missouri	69,701	70,202	70,925	72,598	72,942	4.7
Nebraska	23,732	21,441	21,880	23,739	23,193	-2.3
North Dakota	9,076	7,925	9,144	8,973	8,813	-2.9
South Dakota	8,879	8,225	8,597	8,918	8,763	-1.3

Note: Detail may not add to totals because of rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

SOUTH DAKOTA NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT
September 1986 and September 1987
(In Thousands)

				Average Weekly Hours		Average Hourly Earnings	
	Sept. 1986	Sept. 1987	% Change	Sept. 1986	Sept. 1987	Sept. 1986	Sept. 1987
Total Employment	255.2	257.1	.7				
Mining	2.7	2.6	-3.7				
Construction	11.6	11.4	-1.7				
Manufacturing	29.4	29.8	1.4	43.1	42.3	$7.69	$7.86
Durable Goods	16.2	16.7	3.1	43.0	42.9	$7.38	$7.82
Fabricated Metals & Mach.	9.9	10.1	2.0				
Nondurable Goods	13.2	13.1	-.8	43.1	41.3	$8.10	$7.92
Food & Kindred Products	7.9	7.4	-6.3				
Paper, Printing & Publishing	2.8	2.8	0.0				
Transportation & Pub. Utilities	12.8	12.7	-.8				
Transportation	7.7	7.7	0.0				
Communication	2.8	2.8	0.0				
Electric/Gas/Sanitary Services	2.3	2.2	-4.3				
Wholesale & Retail Trade	66.9	67.8	1.3				
Wholesale Trade	16.2	16.1	-.6				
Durable Goods	7.4	7.2	-2.7				
Nondurable Goods	8.8	8.9	1.1				
Retail Trade	50.7	51.7	2.0				
Finance, Insurance & Real Estate	14.4	14.4	0.0				
Services	60.8	61.5	1.2				
Hotels, Amuse., Pers. & Business	16.7	16.9	1.2				
Medical & Health	23.2	23.6	1.7				
Educational, Membership & Social	17.3	17.4	.6				
Government	56.8	57.1	.5				
Federal	10.8	11.3	4.6				
State	15.0	14.9	-.7				
State Education	6.4	6.3	-1.6				
Local	31.0	30.9	-.3				
Local Education	16.9	17.0	.6				

Source: South Dakota Department of Labor

For further information contact Nancy Nelson

SOUTH DAKOTA AGRICULTURAL INDICATORS

CROP PRODUCTION SUMMARY
SD
NOVEMBER 1, 1987
(000 'a Bushels)

Crop	Production 1986	1987
Corn, Grain	233,700	226,800
Soybeans	40,565	44,220
Sorghum, All	---	--
Sorghum, Grain	14,030	13,440
Sunflowers 1/ 3/	509,460	327,700
Potatoes, Fall 4/	2,520	2,310
Hay, All 2/ 3/	9,330	7,330
Alfalfa 2/ 3/	6,250	5,170
Other 2/ 3/	3,080	2,160

/1 Yield in pounds. Production is in 1,000 pounds.
2/ Yield and production in tons.
3/ Estimates carried forward from earlier forecast.
4/ Yield and production in hundredweight.

Source: South Dakota Crop & Livestock Reporter

PRICES RECEIVED BY FARMERS FOR COMMODITIES SOLD--SOUTH DAKOTA
Sept. 1986 and 1987

Commodity and Unit		Base Period Price 1910-1914 Average	Sept 1986	Sept 1987	Sept 1987 Price as % of Base	Sept 1987 Price Above or Below Sept 1986
Wheat	Bu.	0.85	2.33	2.41	284	3.4
Corn	Bu.	0.51	1.33	1.37	269	3.0
Oats	Bu.	0.35	0.97	1.50	429	54.6
Barley	Bu.	0.59	1.21	1.40	237	15.7
Flaxseed	Bu.	1.68	3.73	3.23	192	-13.4
Milk, Whol.	Cwt.	1.82	1/	1/	---	---
Eggs	Doz.	0.196	1/	1/	---	---
Cattle	Cwt.	5.24	56.00	67.30	1284	20.2
Calves	Cwt.	5.08	68.40	98.60	1622	44.2
Hogs	Cwt.	7.07	58.90	54.50	771	-7.5
Sheep	Cwt.	4.24	32.60	41.30	974	26.7
Lambs	Cwt.	5.66	70.80	91.00	1608	28.5
Wool	Lb.	0.178	0.49	0.47	264	-4.1

1/ Season average price only.

Source: South Dakota Crop & Livestock Reporter.

SOUTH DAKOTA LOCAL CONDITIONS INDICATORS

(% Change Like Period Previous Yr.)

City	Total	Taxable Sales/1 Retail	Services	Telephone Services/2	Housing Starts/3	Postal Indicator/4	Employment*/2
Aberdeen	9.1	10.1	8.5	1.8	-17.7	-15.9	1.7
Belle Fourche	10.3	14.4	-1.1	.8	--		3.3
Brookings	9.3	6.8	12.6		410.2	-11.4	-2.8
Canton	.9	2.2	-6.3	1.2			1.0
Chamberlain	.5	3.5	1.4	.3	--		-3.9
Deadwood	32.0	37.5	-2.9	.2			.7
De Smet	10.7	10.0	-5.5	.5			-6.5
Elk Point	8.9	7.5	5.8	1.2			4.7
Hot Springs	9.0	8.9	9.0		--		1.4
Huron	1.7	6.7	-6.4	.3	-49.5	-12.5	-2.6
Lead	7.6	37.2	52.3	1.7			.7
Madison	4.5	7.5	13.5	1.6	1137.9		5.0
Milbank	-0.2	-4.1	8.4	.2	-25.6		-.9
Mitchell	6.1	6.3	4.2	.8	834.9	4.8	1.5
Mobridge	6.0	6.6	.4	-1.2			.4
Pierre	5.1	11.0	7.2	2.6	95.0	-19.3	.8
Rapid City	8.8	10.9	8.8	3.2	2.5	-8.4	-1.0
Sioux Falls	8.6	9.0	10.0	2.6	-14.4	1.5	.5
Spearfish	17.3	22.6	6.3		-8.6		.7
Sturgis	5.6	7.8	-6.1	3.0			-1.9
Vermillion	8.3	8.9	7.3	4.4	246.0		-.9
Watertown	8.6	7.7	20.4	1.4	12.9	-3.1	-.9
Winner	7.0	6.4	2.3	1.3			-3.0
Yankton	11.1	7.2	2.6	1.4	20.4	113.2	.5

*Based on County Data

1/Percentage change for January-August 1986 and 1987.

2/Percentage change for September 1986 and 1987. Telephone data are for the number of access lines in service.

3/Percentage change for January-September of 1986 and 1987. Data reported for housing represent the value of housing starts.

4/Percentage change for the third quarter of 1986 and 1987. Included in postal indicators are: postage stock sales, postage meters for customers, meter imprint postage (3rd class regular), and second class postage.

Notice:

The December issue of the *South Dakota Business Review* generally includes an article updating South Dakota personal income for the state and counties. This update will be postponed, as the Bureau of Economic Analysis is in the process of preparing benchmark revisions of the income data. County income data for the years 1985 and 1986 should be available in the spring of 1988.

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SOUTH DAKOTA ECONOMETRIC MODEL
(Business Research Bureau - University of South Dakota)

TABLE 4: SELECTED ECONOMIC INDICATORS (S.D. AND U.S.)

DESCRIPTION	1980Q2	1980Q3	1980Q4	1981Q1	1981Q2	1981Q3	1981Q4	1982Q1	1982Q2	1982Q3	1982Q4	1983Q1	Annual Data 1986	1987	1988
	ACTUAL							FORECAST							
SOUTH DAKOTA ENDOGENOUS:															
PERSONAL INCOME (BILLIONS)	$8,953	$9,119	$9,412	$9,496	$9,679	$9,709	$9,904	$9,971	$9,233	$9,560	$9,581	$9,720	$8,581	$8,755	$9,321
% CHANGE	11.4	8.3	13.4	9.4	8.1	6.5	6.1	3.7	1.4	1.5	2.3	1.5	6.0	4.2	6.7
PERSONAL INCOME (1982 $'S)	$7,804	$7,906	$7,992	$7,980	$7,976	$7,920	$7,949	$7,911	$7,551	$7,674	$7,677	$7,715	$7,330	$7,350	$7,568
% CHANGE	6.6	5.0	9.1	6.5	6.5	2.3	4.9	2.2	2.5	2.5	3.5	1.9	3.7	0.2	2.9
NONFARM REAL INC. (MILLIONS)	$7,435	$7,585	$7,582	$7,584	$7,617	$7,612	$8,044	$8,231	$8,334	$8,456	$8,642	$8,769	$7,322	$7,819	$8,412
% CHANGE	0.9	1.6	1.0	1.1	2.0	1.2	2.2	1.6	1.4	1.4	2.2	1.5	3.4	4.6	4.9
NONFARM REAL INC. (1982 $'S)	$6,596	$6,627	$6,622	$6,656	$6,687	$6,626	$6,719	$6,759	$6,802	$6,876	$6,955	$6,993	$6,585	$6,624	$6,830
% CHANGE	0.4	0.4	0.4	0.4	0.5	0.3	0.7	0.6	0.5	1.1	0.5	0.5	3.1	0.6	3.1
WAGES & SALARIES (MILLIONS)	$3,729	$3,805	$3,876	$3,890	$3,991	$4,014	$4,112	$4,155	$4,201	$4,275	$4,327	$4,371	$3,744	$4,014	$4,228
% CHANGE	0.9	2.0	3.9	3.6	2.4	0.6	2.4	1.0	1.1	1.7	2.9	1.0	5.5	6.3	5.3
WAGES AND SALARIES (1982 $'S)	$3,283	$3,321	$3,330	$3,334	$3,376	$3,369	$3,415	$3,419	$3,427	$3,469	$3,497	$3,522	$3,297	$3,372	$3,455
% CHANGE	0.9	1.2	2.9	2.1	2.2	1.5	2.4	0.1	0.2	1.2	1.4	0.7	1.3	2.3	1.8
FARM INCOME (MILLIONS)	$1,476	$934	$695	$692	$802	$876	$1,004	$1,030	$1,033	$1,013	$1,059	$1,052	$1,059	$1,064	$1,109
% CHANGE	139.0	43.4	56.6	8.6	8.8	2.0	0.6	0.4	2.2	2.9	1.6	1.6	16.8	0.5	5.2
FARM INCOME (1982 $'S)	$1,283	$801	$725	$712	$726	$734	$735	$732	$726	$738	$752	$755	$753	$727	$758
% CHANGE	129.0	43.7	55.4	11.8	2.4	0.7	0.1	-0.3	-0.5	1.3	1.9	0.4	13.8	-3.4	4.3
TOTAL EMPLOYMENT (THOUSANDS)	336.2	340.3	329.0	319.0	341.2	349.7	321.5	324.8	342.4	350.4	330.8	316.4	329.0	335.3	334.6
% CHANGE YEAR/YEAR (PERC)	0.3	0.6	2.4	1.6	1.5	2.7	0.2	1.8	0.3	0.2	0.6	0.5	1.2	1.9	-0.2
NONAG. EMPLOYMENT (THOUSANDS)	253.7	254.2	255.5	247.4	257.1	258.4	259.0	260.8	259.7	260.8	259.4	258.4	251.7	254.4	256.9
% CHANGE YEAR/YEAR (PERC)	0.3	0.6	2.4	1.6	1.3	1.7	1.2	0.6	1.0	0.8	0.9	0.4	0.9	1.2	0.9
MANUFACTURING EMPLOYMENT	27.8	29.2	29.1	29.6	29.5	30.2	30.6	30.1	31.0	31.6	31.5	31.1	27.4	29.2	31.1
% CHANGE YEAR/YEAR (PERC)	8.5	9.0	10.2	10.7	9.8	9.5	9.2	9.0	9.0	9.0	9.0	9.0	-4.2	6.5	6.6
AUTO REGISTRATION	5048	5025	3667	4740	5475	5206	4253	4227	4615	4227	4227	4227	4345	4433	4336
% CHANGE YEAR/YEAR (PERC)	21.8	27.3	3.2	32.0	8.5	-17.5	16.0	7.1	-0.5	-0.7	-2.7	0.0	7.5	2.1	-2.3
HOUSING STARTS	701	531	334	250	672	706	544	358	812	676	600	516	595	614	609
% CHANGE YEAR/YEAR (PERC)	15.2	-29.0	24.9	39.4	15.8	32.7	61.5	14.3	20	-4.0	-6.8	-11.0	-16.3	18.0	-0.8
RETAIL SALES	$2,730	$2,770	$2,670	$2,416	$2,636	$2,649	$2,750	$2,833	$2,836	$2,532	$2,592	$2,140	$2,655	$2,619	$2,496
% CHANGE YEAR/YEAR (PERC)	0.4	3.0	1.1	6.7	-2.7	-4.4	-5.2	-3.4	-5.8	-4.8	-5.9	-8.3	0.3	-1.4	-4.5
UNEMPLOYMENT RATE (%)	4.2	3.7	4.8	4.9	3.7	3.5	4.1	5.2	4.2	3.9	4.4	5.5	4.7	4.0	4.4
U.S. ENDOGENOUS:															
REAL GNP (1982 $'S)	$3,705	$3,718	$3,732	$3,772	$3,795	$3,831	$3,846	$3,867	$3,875	$3,896	$3,919	$3,937	$3,715	$3,811	$3,886
% CHANGE	0.6	1.5	1.5	4.4	2.4	3.0	1.6	1.1	1.7	2.4	2.4	1.8	2.9	2.6	2.0
GNP DEFLATOR (1982 = 100)	113.7	114.7	114.9	116.1	117.1	117.8	118.8	119.8	120.9	121.3	121.9	124.0	116.1	117.5	121.5
% CHANGE	0.7	3.5	3.0	4.2	3.4	2.4	3.4	4.0	3.9	4.0	3.9	2.5	2.6	5.0	3.5
PERS. CONS. DEF. (1982 = 100)	113.6	114.5	115.2	116.9	118.3	119.4	120.4	121.5	122.6	123.7	124.8	126.0	114.2	118.8	123.2
% CHANGE	0.6	3.2	3.4	4.8	4.2	4.3	4.4	4.0	3.6	3.6	3.6	3.8	2.2	4.0	3.7
CONS. PRICE INDEX (1967 = 100)	326.5	328.3	330.8	332.0	333.0	340.3	340.7	340.1	353.5	356.2	360.0	364.0	329.4	340.5	354.5
% CHANGE	7.0	2.9	2.8	5.1	4.8	3.6	4.0	5.9	5.9	4.7	4.4	4.1	3.9	3.7	4.1
UNEMPLOYMENT RATE (%)	7.5	7.4	7.5	7.5	7.4	7.4	7.3	7.3	7.2	7.1	6.9	6.7	7.0	6.8	6.0
TREASURY BILL RATE (91 DAY)	8.5	9.5	9.9	9.5	9.7	9.0	9.0	8.8	8.9	9.0	9.2	9.4	6.0	5.8	6.0

FORECAST DATE: November 1982 (updated)

CONSUMER PRICE INDEX
Central States
Jan. - Sept. '82
(1967=100)

Item	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	% Change Jan. - Sept.
All Items	313.1	314.4	315.4	316.0	316.7	316.1	340.8	342.7	344.4	3.4
Food & Beverage	324.5	325.0	325.4	326.0	326.8	326.6	325.1	325.6	326.6	1.8
Food	328.9	330.1	330.9	331.6	332.5	332.1	333.6	333.6	334.9	1.8
Alcoholic Beverages	242.5	243.2	243.6	244.0	245.0	245.9	245.7	247.3	247.8	2.2
Housing	363.9	365.1	366.4	367.7	368.9	370.3	372.5	374.2	375.4	3.2
Shelter	412.3	414.0	415.9	417.8	419.3	420.2	422.1	425.1	426.2	3.4
Rental costs	125.3	125.7	126.5	127.1	127.5	127.9	129.3	130.1	129.8	3.6
Homeowners' costs	122.9	123.2	123.8	123.8	124.0	124.2	124.6	125.6	126.0	3.3
Fuel & other utilities	373.7	374.8	374.9	374.2	377.5	387.6	388.1	391.1	389.8	4.3
Fuel	443.7	445.1	444.5	442.5	448.7	470.8	468.9	473.6	471.6	6.3
Fuel oil, coal & bild. gas	417.9	420.2	419.8	418.6	420.7	436.6	437.9	442.3	441.0	2.7
Gas (piped) & electricity	429.8	429.9	428.7	425.3	433.8	454.8	453.5	457.6	457.6	6.7
Other util. & Pub. Services	234.9	235.8	236.2	237.0	237.2	238.5	238.5	239.9	239.3	1.7
Household furn. & operation	253.1	253.5	254.3	255.2	254.8	254.9	255.1	255.4	255.8	1.1
Apparel & upkeep	207.1	208.4	215.2	218.7	219.0	214.5	210.5	214.7	222.2	7.3
Transportation	308.5	310.0	310.6	313.3	314.6	314.7	318.5	320.2	320.6	3.9
Private transportation	299.8	301.3	301.9	304.8	306.3	306.6	310.5	312.0	312.1	4.1
Public transportation	436.9	439.8	441.6	440.8	439.5	438.1	435.3	442.8	445.1	2.6
Medical care	469.6	472.6	475.0	457.3	478.9	481.3	484.1	486.1	487.8	4.0
Entertainment	278.3	278.7	279.8	281.4	282.0	282.3	283.5	283.9	285.2	2.5
Other goods and services	358.1	359.7	360.3	361.1	362.0	362.9	365.1	366.6	373.9	4.4

*Consumer Price Index for all Urban Consumers

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

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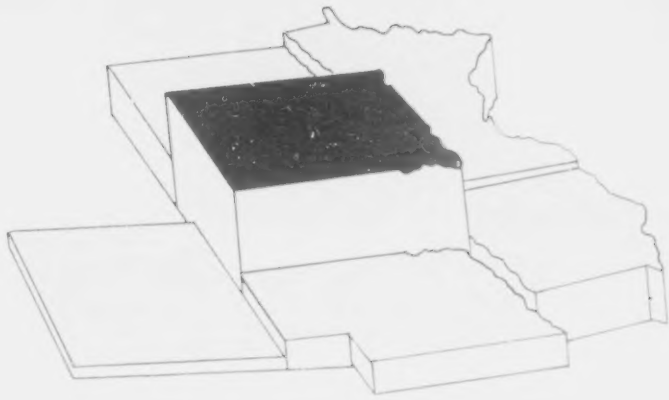

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General Indicators	Latest Quarter	SOUTH DAKOTA Latest Quarter	SOUTH DAKOTA Year Ago	SOUTH DAKOTA Percent Change	UNITED STATES Latest Quarter	UNITED STATES Year Ago	UNITED STATES Percent Change
Personal Income ($ Mil.)	1987-3	8,728	8,225	6.1	3,757,699	3,548,335	-5.9
Farm Prop. Income ($ Mil.)	1987-3	768	593	29.5	38,628	33,233	16.2
Non-ag Employment (Thous.)	1987-4	258	255	1.2	103,267	100,397	2.9
Unemployment Rate (%)	1987-4	4.7	4.8	-2.1	5.6	6.5	-13.8
Total Employment (Thous.)	1987-4	328	329	-0.3	113,795	110,732	2.8

Note: All U.S. data seasonally adjusted except for the unemployment rate and total employment. For South Dakota only personal income and farm proprietors' income are seasonally adjusted.

COMPETITION, EFFICIENCY AND ECONOMIC DEVELOPMENT

An Essay

Robert L. Johnson

Did you ever wonder why, given two businesses operating in the same locality and selling the same products or services, one may prosper and the other may struggle for a time and then fail? Do you remember (or recall an older person talking of) local flour mills which processed South Dakota wheat? These are gone now. In their place, we may have a factory which buys its raw materials from a distant state and sells most of its product out of state or even in another country. Have you wondered why the proximity of product and

Continued on page 4

About the Author: Robert L. Johnson, Ph.D., is Professor of Finance at the School of Business, University of South Dakota, Vermillion, South Dakota. He will be retiring at the end of this semester after 34 years of teaching.

SOUTH DAKOTA'S TAX BURDEN: AN UPDATE

Raymond J. Ring

Taxes engender heated debate, but seldom more than they have during the last few years. Federal tax reform occupied the front burner until the Tax Reform Act of 1986 passed. Reforming federal taxes did not lower the heat, but shifted it instead onto state and local governments. States with individual income taxes had to decide what to do with the tax "windfall" from federal tax reform. Some kept the windfall; others gave it back. State and local officials also had to deal with less federal funding and increased emphasis on economic development and how taxes influence it.

Continued on page 5

About the Author: Raymond J. Ring, Ph.D. is Associate Professor of Economics at the School of Business, The University of South Dakota, Vermillion, South Dakota.

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TREND OF BUSINESS

The United States Economy

The economic outlook for 1988 appears somewhat clouded. Recent signs of a slowdown are apparent in the fourth quarter 1987 drop in real consumption and investment spending. Blue Chips outlook for real GNP growth in 1988 is 2.4 percent compared to 2.9 percent in 1987.

On the positive side, expansion continues in the labor market. The unemployment rate fell slightly—5.8 percent in the third quarter of 1987 compared to 5.6 percent in the fourth quarter.

Wholesale prices fell 0.2 percent in February aided by drops in both food and energy costs. The inflation rate as measured by the Consumer Price Index was 3.6 percent in 1987. It is expected to move up by 4.0 percent for this year.

The Commerce Department reported gains in February retail sales with consumers purchasing $128 billion worth of goods compared to $127.3 billion in January 1988 and $124.2 billion a year ago.

U.S. total personal income rose 5.9 percent in the third quarter of 1987 compared to this period a year ago. For this same period, farm proprietors' income increased 16.2 percent.

South Dakota Economy

South Dakota's employment indicators maintained by the Business Research Bureau showed some improvement in the fourth quarter of 1987 compared to the third quarter. On a seasonally adjusted basis, non-agricultural employment rose 0.8 percent and construction employment increased 5.3 percent for this same period. The unemployment rate fell slightly from 4.5 percent in the third quarter to 4.4 percent in the fourth quarter of 1987.

Personal income fell slightly—down 0.9 percent in the third quarter of 1987 compared to the previous quarter. Lower livestock prices and decreased subsidy payments resulted in a nearly 16 percent drop in South Dakota's farm income for this same period.

New car sales were strong in the fourth quarter of 1987 compared to the previous quarter—up 21.7 percent. The sale of new trucks fell 2.3 percent for this same period.

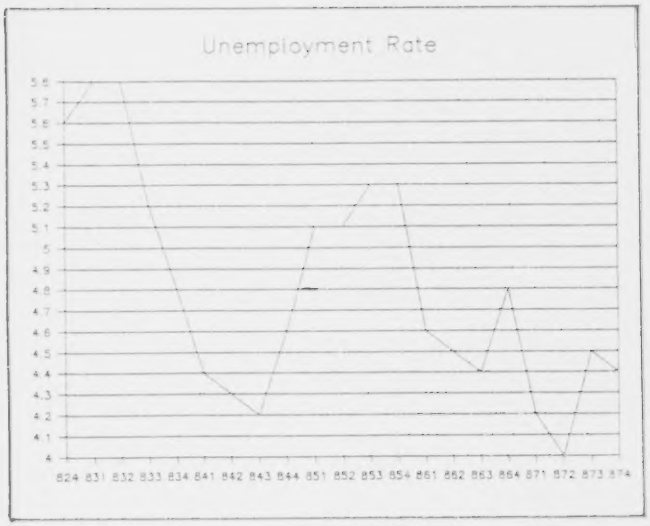
South Dakota
Business Indices
1986-1987
Seasonally Adjusted (1982=100)

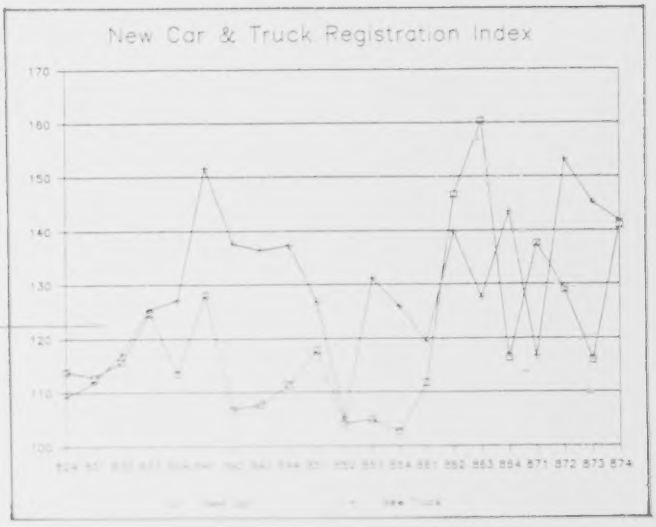
	1986		1987			
	3rd qtr	4th qtr	1st qtr	2nd qtr	3rd qtr	4th qtr
Personal Income	109.1	113.2	115.6	112.3	111.3	
Farm Proprietors Income	127.3	192.1	230.5	187.9	158.0	----
Non-ag Employment	110.4	110.2	107.4	111.4	111.1	112.0
Construction Employment	125.5	120.1	123.5	126.3	123.5	130.0
Unemployment Rate (%)	4.4	4.8	4.2	4.0	4.5	4.4
New Cars	160.4	116.3	137.6	129.0	115.9	141.0
New Trucks	127.6	143.5	116.6	153.2	145.2	141.9

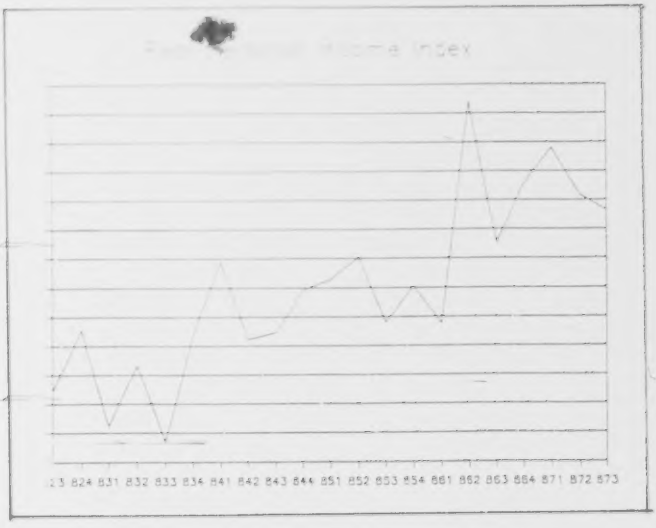
SOUTH DAKOTA BUSINESS & ECONOMIC INDICES

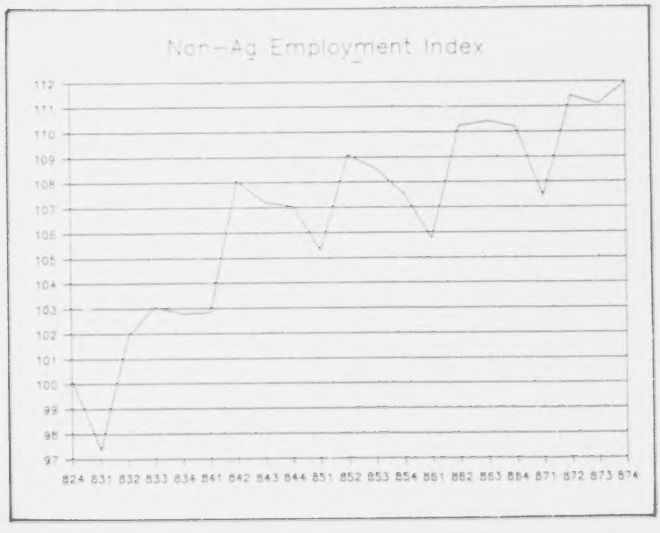
Quarterly Data 1982-1987

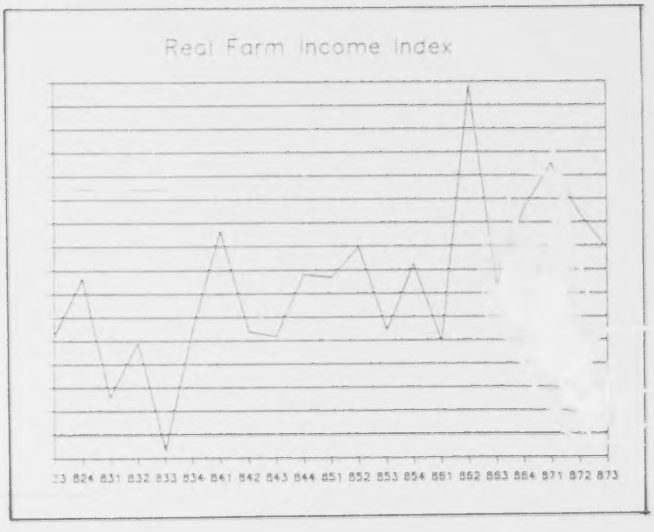
Adjusted for Seasonal Variation











Johnson, continued from page 1.

market in the case of the flour mills was not enough to insure at least survival if not success? Or maybe you are puzzled as to how those factories that produce items which we scarcely recognize, not only survive, but prosper and expand.

There may be dozens or even hundreds of answers to the types of questions raised above. Rather than attempt to list as many potential answers as possible, let us try to get at the few root reasons which would be endemic to most of these potential answers. These root reasons are simple enough, but appear to be overlooked quite often.

A business can prosper, even if it does not function very efficiently, if it can exercise some control over its market. One may think here of some type of monopolistic power. Some may not like the ring of the term "monopolistic power." If so, how about using instead the popular notion of finding a market niche? Isn't a niche a type of monopoly power? Whatever one labels it, the distinguishing feature is that the producer has some control over the price rather than having to accept a price found in the market as is the case with a commodity type product.

Some businesses prosper with no monopoly power or market niche. We know from our experiences that this may continue even in the long run. Why have some farmers failed in recent years, while some of their neighbors have not only survived but have earned a good living? There may be many answers, but the key word is efficiency. The efficiency may be either in operations, in marketing, or in financing.

These thoughts lead us to conclude that there is almost always one or both of two factors present in the business which survives and prospers. These are: (1) some element of monopoly power and (2) being more efficient than one's competitors. The early flour mills have failed to survive because they were producing a commodity product and, even though they may have had a transportation advantage (an efficiency), the small scale of their operations put them at a disadvantage relative to the more efficient, larger mills. The newer mills may also have a transportation advantage in that they are located near population centers which reduces end product transportation. The surviving farmers were in some way more efficient than those who failed. Some of our new factories which neither use home-grown products nor sell very much in the home market prosper because they have discovered some market niche—a type of monopoly power. Some of the other prospering new factories may have efficiencies relative to their competitors wherever located.

Economic theory teaches us that, given pure competition, in long-run equilibrium there are no economic profits. (This differs from accounting profit in which the cost of owners' capital, and possibly also owner's labor, has not been deducted.) If economic profits exist, there will be new entrants to the industry driving down prices. If losses are incurred, firms, will exit (perhaps due to failure) allowing prices to rise.

Although there are no profits in theoretical purely competitive long-run equilibrium, some firms do prosper in the long run. These are the firms which in some sense are more efficient or which have maintained some monopoly power. Farming is a good example of an industry where we see the efficient prospering in the long run. Retailing is another, even though retailers are not as purely competitive as farmers. Since firms which are unlikely to either be efficient or to capture a market niche will not survive in the long run, any policy which artifically fosters such firms will only result in a wasteful temporary diversion of economic resources.

This leads to another very important observation from economic theory. Resources are scarce. This is true both of labor and of capital as well as of natural resources. The scarce resources provide more satisfaction in the long run if used efficiently. Noncompetitive businesses can survive with some inefficiency which results in less than optimum resource allocation. Businesses which innovate, that is, which come up with market niches, possess some monopoly power. However, the innovator is necessary for worthwhile economic growth and development; therefore, some inefficiency is tolerable in the short run.

Fostering inefficient businesses is wasteful of economic resources. This is true both of new businesses and of existing companies in danger of failing. In both cases, if efficiency is not achieved, the businesses will fail when the fostering or the subsidizing stops. Prior to the failure, resources will have been diverted from more productive uses.

We should distinguish between an inefficient business and an inefficient capital market. The former is wasteful of scarce economic resources, whereas market inefficiencies prevent capital, and indirectly other economic resources, from finding their way to the most productive uses.

One apparent capital market inefficiency is seen in the difficulty which innovative new firms generally have in obtaining seed and early stage financing. This does not appear to be entirely the result of unfavorable risk-reward considerations.

Lending institutions exist, but at this time there is virtually no organized mechanism for providing equity capital for new or expanding small businesses in South Dakota. Lending institutions may at times appear to be too aggressive in their lending practices and at other times too conservative. At either extreme, capital may not be transferred in the most efficient manner, but at least the mechanism is in place.

Political intervention in the capital markets can be justified only if this process tends to improve market efficiency. Efficiency means that resources find their way to the most productive uses. One must remember that political intervention does not in any way create capital which did not exist previously; intervention merely changes the way in which an existing pool of capital is used. Even though private capital markets may not always be perfect, it seems unlikely that a government office would be any more perfect.

Up to this point, South Dakota has not attracted private venture capital institutions. This is probably due to a concern that there may not be enough activity to support the overhead of a venture capital firm. Since there is no organized mechanism for equity capital, government help in this area may be justified. Since economic development is stifled due to a market inefficiency, there may be a legitimate place for the State in the equity venture capital area.

There may be several methods through which the State could intervene. Generally, decisions made in the private sector and, thereby, controlled by the market will result in better, more efficient resource allocation than will decisions controlled by the political process. Where the state is needed, it should structure the process to retain the guidance of competitive private markets as much as possible.

Maybe a mechanism for bringing together entrepreneurs and wealthy individual investors in an organized way would work. Perhaps this could be patterned after Job Service which is a clearing house between employers and job

seekers. A clearing house between wealthy investors and entrepreneurs could help to correct the market inefficiency in the equity capital market and yet leave the decisions in private hands. The State could fund the budget for such a clearing house.

Direct investment in equity capital implies risk. The timid may shy away from this, but instead attempt to justify unneeded political intervention in the debt flow process. Although being concerned about risk is understandable, subsidizing debt flow is likely to be neutral at best and quite likely harmful. It is neutral, in the flow of capital process, if the subsidized business would have obtained capital from private, nonsubsidized institutions. It is harmful if the process of intervention results in scarce resources being diverted to the inefficient and noninnovative businesses.

Subsidizing local business development is widely practiced by states and cities. From both a social and political viewpoint, it is easy to understand how this practice has developed. However, given a broader geographic base, this may be very poor economics. City A through some economic enticements (subsidies) attracts a company which otherwise would have gone to City B. Later, this process is reversed with B becoming the host community for another business. At best, this is a no-win situation. This type of wasteful warfare is also practiced among states.

But what does City B (or State Y) do if City A (or State X) is stealing their businesses—new and existing alike—through attractive give-away programs? Socially and politically, City B can hardly be expected to do nothing. This, apparently, would be accepting defeat. Retaliation may be the natural reaction. A better long-range plan may be for both cities (or states) to work for the legal abolishment of give-away programs designed to steal from one another. Another good alternative is for the state or local community to spend effort and money in improving the infrastructure of services. This may help to attract new businesses as well as help the existing businesses to operate more efficiently.

As matters now stand, who are the winners? There are none, although the officials of each state or city can count the jobs created in their jurisdiction by new or expanded subsidized businesses. Two vital questions remain unanswered by the typical reporting system. How many of these businesses would have created these jobs without the subsidies? How many jobs were lost through this process of non-market determined transfer of economic resources?

As matters now stand, who are the losers? All of society loses in this process. Scarce resources are transferred to less than optimum uses. These resources will not be available elsewhere. Their more efficient use could have satisfied more consumer needs and wants. But do the people associated with the subsidized businesses not win? In the short run, they may. The owners may control some resources paying less than market determined prices. The employees may have better paying or more satisfying jobs than they had before. However, if a business is inefficient, it will fail when the subsidies cease. The trauma caused by the dislocations occurring then may far outweigh the temporary satisfaction from the initial subsidies. There are no winners, in the long run, when the inefficient are subsidized. If the subsidy results in the transfer of efficient businesses from one locality to another, the localities more adept at this may win in some respect, but this is at the expense of other localities and, given the wasted resources, society at large loses.

So what should be done? We should recognize that true entrepreneurs are, and always have been, the strength of our economy—local, state, and national. Entrepreneurs redirect economic resources to new uses which may be more efficient than the old or they redirect resources to product or service innovations. Society, including government and quasi-government units as well as volunteer efforts, should encourage true entrepreneurship. The encouragement may take the form of education and research directed toward fostering, or even creating, entrepreneurial ideas. Society also may encourage entrepreneurial activity by taking an active role in countering capital market inefficiencies which impede the flow of economic resources toward the most productive uses. As mentioned earlier, this action, to be effective should be in the area of equity or risk capital.

It is as important to ask what should not be done. In a few words, nothing should be done under the guise of economic development which promotes or subsidizes the inefficient or the non-innovative new or expanding business. Also, less economic resources would be wasted if we would do less subsidization designed to accomplish business relocation.

Action, public or private, which always accomplishes the ideal of fostering the efficient and innovative, but which never directs resources toward the inefficient is more than should be expected. This is because no analyst can ever be sure at the fostering stage if a business will be efficient or innovative. However, policy should strive for the ideal even though it may not be absolutely attainable in practice. Certainly public policy which fosters inefficient businesses—new or existing, home-grown or imported—can only result in long-run detriment to economic development. Policy, public or private, should be designed to promote the efficient and the innovative. The promotion, on the part of government, should be as indirect and non-political as possible. Where the free market system fails to function efficiently (such as with risk capital), there is a need for government help, but not control. Also, the government is needed in the traditional roles of providing protection, education, roads, recreation, and so forth. As these functions are improved, economic development is more likely to take place.

Ring, continued from page 1.

South Dakota officials were not insulated from that heat. With total revenue (adjusted for inflation) declining, state and local officials adopted several changes to raise tax collections. As a result, inflation-adjusted taxes rose for three years. However, those changes were relatively small and some produced only one-time increases in revenue. The heat is still on.

The 1988 Legislature added five cents per gallon to the gasoline tax, defeated personal and corporate income tax bills, and approved an interim study of the state tax system. Dakota Proposition II, the initiated measure which would limit property taxes, will keep the heat on, at least until the public votes on it in November. If voters approve it, the tax debate will turn white-hot.

Taxes Adjusted for Inflation

South Dakota state and local tax collections, measured in current dollars, have increased every year since 1963. (All figures are for fiscal years.) This is not surprising, since prices and incomes also rose every year, albeit at a slower pace during the 1980's. If taxes are to be accurately compared, we must adjust them for inflation. Figure 1 shows

Continued on page 6.

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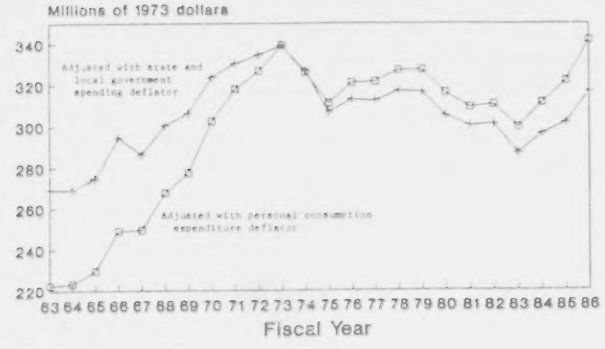
South Dakota state and local taxes adjusted for inflation in two different ways. First, adjusting with the personal consumption expenditures deflator, a measure of consumers' cost of living[1], gives a measure of changes in **purchasing power given up** by taxpayers when they pay taxes. Second, adjusting with the implicit deflator for state and local government spending, an index of prices of goods and services typically purchased by state and local governments, provides a measure of changes in governments' **ability to buy goods and services** with those taxes. By either measure, the real value of South Dakota state and local tax collections rose through 1973, generally fell between 1973 and 1983, and rose after that.

Figure 1 also shows another trend. Governments' purchasing power fell more (or rose less) than did real tax burdens, because prices of government-provided goods and services rose more rapidly than did prices of consumer goods. South Dakota taxes adjusted for taxpayers' purchasing power fell 12 percent between 1973 and 1983, while taxes adjusted for governments' purchasing power fell 15 percent. Since 1983, taxpayers' burden has risen 14 percent, while governments' purchasing power has risen only 10 percent. As a result, real 1986 tax collections were about 1 percent higher than in 1973, but bought about 7 percent less in government goods and services.

FIGURE 1

SOUTH DAKOTA TAXES
Adjusted for inflation


Millions of 1973 dollars
340
320
300
280
260
240
220
Adjusted with state and local government spending deflator
Adjusted with personal consumption expenditure deflator
63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86
Fiscal Year

Source: Taxes: Bureau of Census, Governmental Finances, various issues; Deflators: Bureau of Economic Analysis.

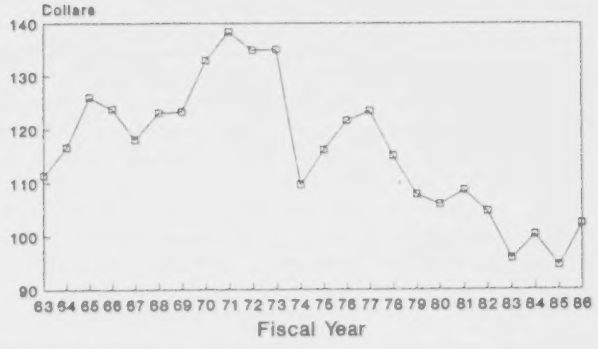
Just over half of the increased collections between 1983 and 1986 came from local taxes, the rest from state taxes. Most of those increases resulted from conscious policy choices: new local sales taxes and higher rates or accelerated collections on other taxes. In 1984, the state accelerated sales tax, bank franchise tax, and inheritance tax revenues by requiring earlier payment. Higher property taxes and higher bank franchise tax collections (probably attributable to credit card operations) contributed to the 1985 increase. For 1986, the legislature raised tax rates on cigarettes and motor vehicle licenses. Local sales tax collections rose in 1985 and 1986, mostly due to adoption of new local sales taxes.

Taxes Relative to Personal Income

Another way to compare tax burdens over time is to relate them to taxpayers' incomes. Figure 2 shows that South Dakota taxes per $1,000 personal income peaked in 1971 and generally fell after that. As explained previously, South Dakota's real tax burden was about the same in 1986 as in 1973 because taxes went up about as much as did the cost of living. During the same period, personal income grew faster than prices, so South Dakotans' taxes fell relative to their incomes.

FIGURE 2

SOUTH DAKOTA TAXES
Per $1000 personal income



Source: Dept. of Commerce, Bureau of Census, Governmental Finances, various years.

State and local taxes took nearly fourteen cents out of every dollar of South Dakota personal income in 1971, but took less than ten cents out of each dollar in 1983. Thus, this tax burden measure fell 30 percent during that time. Since 1983, taxes relative to personal income rose less than 7 percent. The decline in taxes relative to personal income ended in 1983; the trend since then is not yet clear.[2]

South Dakota Taxes Compared to Other States' Taxes

Table 1 shows state and local tax collections per capita and per $1,000 personal income for the United States, South Dakota, and the six bordering states. It shows that South Dakota per capita taxes fell relative to other states. Even as South Dakota's real taxes rose after 1983, as discussed previously, its relative burden continued to fall because other states' taxes rose even more rapidly. South Dakota taxes per capita fell from 93 percent of the national average (and a ranking of 24th of the 50 states) in 1970 to 75 percent of the national average (41st) in 1983, then to 74 percent of the national average (43rd) in 1985. Taxes per $1,000 personal income fell from 114 percent of the national figure (7th) in 1970 to 86 percent (42nd) in 1983, then rebounded to 90 percent (36th) in 1986.

TABLE 1
Taxes Per Capita and Per $1000 Personal Income, South Dakota and Surrounding States

	1965		1970		1975		1980		1983		1986	
	Amount	Rank	Amount	Rank	Amount	Rank	Amount	Rank	Amount	Rank	Amount	Rank
Per Capita												
U.S.	264	--	427	--	664	--	987	--	1216	--	1547	--
SD	241	31	398	24	543	33	789	37	914	41	1142	43
Iowa	276	16	436	16	637	21	967	23	1171	20	1417	23
Minn.	299	7	442	15	754	8	1125	8	1473	4	1715	11
Mont.	265	22	398	25	612	26	1000	16	1179	19	1376	28
Nebr.	220	38	396	26	577	28	963	24	1146	23	1338	29
ND	248	26	376	28	613	25	847	29	1100	27	1294	32
Wyo.	278	15	434	17	697	15	1399	3	2443	2	2628	2
Per $1000 Personal Income												
U.S.	104	--	117	--	123	--	116	--	111	--	113	--
SD	126	3	133	7	116	29	106	32	96	42	102	36
Iowa	116	17	125	16	121	18	111	26	109	21	111	21
Minn.	127	2	125	15	139	6	127	8	132	4	122	10
Mont.	118	23	127	5	126	14	130	7	126	7	124	8
Nebr.	93	42	112	27	110	34	111	27	108	24	100	40
ND	118	24	125	13	110	35	102	40	103	31	106	31
Wyo.	113	19	134	5	184	9	148	3	202	2	198	2

Source: Department of Commerce, Bureau of Census, Governmental Finances, various years.

Compared to the six contiguous states, South Dakota has the lowest taxes per capita and has held that bottom position for several years. Between 1980 and 1985, while taxes per $1,000 personal income continued to fall in South Dakota, they rose in four of the six adjoining states. In 1986, South Dakota's taxes per $1,000 personal income apparently

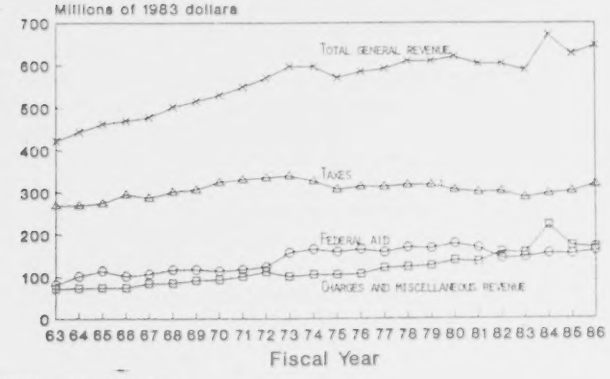
"emerged from the cellar" for the first time in several years.[3]

Other Revenue Sources

We can better understand changes in South Dakota taxes and spending if we also examine how other sources of government revenue have changed. Figure 3 shows state and local taxes, federal aid, charges and miscellaneous revenue, and total general revenue (the sum of the other three) for South Dakota between 1963 and 1986.[4] All sources are adjusted for inflation using the GNP deflator for state and local government purchases of goods and services. Thus, they show how South Dakota state and local governments' purchasing power has changed over time.

FIGURE 3

SOUTH DAKOTA REVENUE SOURCES
Adjusted for inflation



Source: Same as Figure 1.

Total inflation-adjusted general revenue rose 41 percent between 1963 and 1973. All three components rose during that time, as governments responded to increasing demands for their services and the incentives of rising federal aid tied to matching provisions. Falling taxes pulled general revenue down in 1975. General revenue then resumed its climb—at a much slower pace—buoyed mostly by charges and miscellaneous revenue. Between 1973 and 1980, general revenue—and thus, state and local government spending—rose 4 percent, even as taxes fell 10 percent.

The situation changed after 1980. Declining federal aid joined falling taxes in reducing total general revenue by 5 percent between 1980 and 1983. Faced with this falling total revenue, policymakers accelerated sales, bank franchise, and inheritance tax collections; raised cigarette and motor vehicle tax rates; and adopted new local sales taxes and higher local sales tax rates. Charges and miscellaneous revenue also rose between 1983 and 1985, mostly from increases in state government interest earnings and miscellaneous local government charges. By 1985, general revenue had reached new highs, again aided by gains in all three components, but mostly by higher taxes. They rose further in 1986 as rising taxes and federal aid more than offset declining charges and miscellaneous revenue.[5]

Summary and Conclusions

Examining South Dakota general revenue and its components—especially taxes—since 1963, we discern four periods of changing reliance on different revenue sources. Through 1973, South Dakota taxes, federal aid, and charges and miscellaneous general revenues rose. During this period, government spending rose throughout the nation because there were more people to serve (e.g., more "baby boomers" to educate) and voters wanted more services and benefits (e.g., higher welfare payments). Between 1973 and 1980, South Dakota general revenue continued to rise (except for one year), but much more slowly and only because federal aid and charges and miscellaneous revenue more than made up for falling taxes. Between 1980 and 1983, falling taxes and federal aid combined to bring general revenue down, even though charges and miscellaneous revenue rose. Since 1983, general revenue has risen, mostly from accelerated collections, new local taxes, higher rates on old taxes, and higher charges and miscellaneous revenue. Federal aid rose after 1982, but remains 9 percent below its 1980 peak.

What of the future? South Dakota state government depends very heavily on consumption taxes which do not consistently grow faster than the inflation rate. The large federal deficit and the Administration's opposition to much domestic spending make it unlikely that federal aid to state and local governments will increase significantly any time soon. Barring a new outbreak of inflation, interest rates are not likely to return to their 1985 levels, so charges and miscellaneous revenue (of which interest is a major source) are not likely to rise dramatically. With great dependence on agriculture, the property tax is not likely to rise unless mill levies are raised, and the threat of Dakota Proposition II makes that unlikely.

All of this leads to the conclusion that it will be difficult for South Dakota officials to maintain real levels of government spending and nearly impossible to significantly raise real spending without higher tax rates or new taxes. Without those increases, South Dakota governments' revenues—and spending—will remain very low compared to other states. With those prospects, a tax study, and Dakota Proposition II, taxes will not soon be relegated to the back burner.

Endnotes

[1] The personal consumption expenditures deflator (estimated by the U.S. Department of Commerce) is less well-known than the Consumer Price Index (CPI), but is preferred by many economists because it accounts for changes in spending patterns, whereas the CPI measures the cost of an unchanging "market basket" of goods and services.

[2] Year-to-year changes in taxes per $1,000 personal income should be treated with caution because state personal income can change dramatically from year to year, especially in small rural states like South Dakota. For example, the precipitous decline in 1974 is due to very high incomes in that year, especially farm incomes. State personal income data are also sometimes subject to major revisions, especially of the most recent data. Longer-term trends are more meaningful.

[3] The preceding footnote's caution about year-to-year variability in personal income figures also applies here.

[4] "General revenue" includes all receipts except insurance trust revenue (e.g., retirement funds) and proprietary activities such as utilities and liquor stores. It should not be confused with the "general fund" which receives only part of state and local governments' receipts and is used for only part of their spending. For example, receipts from the state gasoline tax and federal highway aid go into the South Dakota Highway Trust Fund. They are part of "general revenue," but not part of the "general fund."

[5] The anomalous increase in 1984 charges and miscellaneous revenue is due to a one-time sale of property by a local government-owned utility.

TAXABLE SALES
Counties and Selected Cities in South Dakota
Jan.-Dec., 1986 and 1987
(In $000's)

REGION I

	Jan.-Dec. 1986	Jan.-Dec. 1987	% Change
Brookings	111,514	120,336	7.9
Brookings	101,975	110,537	8.4
Elkton	2,167	2,136	-1.4
Volga	3,602	3,969	10.2
Clark	11,228	10,326	-8.0
Clark	8,809	7,952	-9.7
Codington	161,162	174,866	8.5
Watertown	156,212	169,381	8.4
Deuel	14,971	15,818	5.7
Clear Lake	10,803	11,571	7.1
Gary	1,162	1,245	7.1
Toronto	1,782	1,594	-10.5
Grant	41,008	41,666	1.6
Big Stone C.	3,036	3,098	2.0
Milbank	35,950	36,243	0.8
Hamlin	12,047	13,002	7.9
Bryant	2,794	3,114	11.5
Castlewood	1,398	1,470	5.2
Estelline	3,101	3,206	3.4
Hayti	2,471	2,418	-2.1
Kingsbury	20,458	21,591	5.5
Arlington	5,713	5,918	3.6
De Smet	8,938	9,914	11.0
Lake Preston	2,820	2,788	-1.1
Lake	45,202	47,385	4.8
Madison	41,905	43,996	5.0
Miner	9,210	10,536	14.4
Howard	7,024	8,339	18.7
Moody	26,998	27,527	2.0
Colman	16,243	16,650	2.5
Flandreau	9,737	9,762	0.3
TOTAL	453,798	483,053	6.4

REGION II

	Jan.-Dec. 1986	Jan.-Dec. 1987	% Change
Clay	45,906	49,930	8.8
Vermillion	40,713	44,106	8.3
Lincoln	34,512	37,586	8.9
Canton	15,340	14,825	-3.4
Lennox	6,994	7,420	6.1
McCook	16,781	17,627	5.0
Bridgewater	2,490	2,636	5.9
Canistota	1,893	1,860	-1.7
Salem	9,732	9,877	1.5
Minnehaha	987,640	1,064,506	7.8
Baltic	2,084	2,394	14.9
Brandon	6,729	7,997	18.8
Colton	2,628	3,005	14.3
Dell Rapids	9,712	10,543	8.6
Garretson	4,442	4,830	8.7
Hartford	2,513	2,831	12.7
Sioux Falls	927,533	1,001,015	7.9
Turner	22,276	23,040	3.4
Centerville	3,202	3,184	-0.6
Marion	8,361	8,871	6.1
Parker	3,893	3,793	-2.6
Union	28,114	30,418	8.2
Alcester	7,104	8,116	14.2
Beresford	10,318	10,241	-0.7
Elk Point	5,652	6,181	9.4
TOTAL	1,135,229	1,223,108	7.7

REGION III

	Jan.-Dec. 1986	Jan.-Dec. 1987	% Change
Aurora	10,542	11,511	9.2
Plankinton	6,979	7,565	8.4
Bon Homme	22,125	22,817	3.1
Avon	4,172	4,615	10.6
Scotland	3,989	4,197	5.2
Springfield	3,608	3,426	-5.0
Tabor	4,232	4,396	3.9
Tyndall	5,777	5,867	1.6
Brule	25,822	26,266	1.7
Chamberlain	20,645	20,773	0.6
Kimball	4,529	4,705	3.9
Charles Mix	30,884	33,380	8.1
Geddes	971	987	1.6
Lake Andes	4,771	4,927	3.3
Platte	12,940	14,524	12.2
Wagner	11,019	11,611	5.4
Davison	131,490	139,898	6.4
Mitchell	128,646	136,937	6.4
Douglas	10,941	11,508	5.2
Armour	4,917	5,175	5.2
Corsica	4,523	4,467	-1.2
Gregory	20,566	21,081	2.5
Burke	4,983	5,080	1.9
Gregory	10,359	10,832	4.6
Hanson	4,939	5,297	7.2
Alexandria	3,128	3,176	1.5
Emery	1,684	1,573	-6.6
Hutchinson	32,381	33,616	3.8
Freeman	12,319	13,299	8.0
Menno	4,810	5,029	4.6
Parkston	10,373	10,421	0.5
Tripp	2,981	2,910	-2.4
Jerauld	7,866	8,140	3.5
Wess. Sprgs.	6,787	7,137	5.2
Sanborn	5,037	5,270	4.6
Woonsocket	3,730	3,954	6.0
Yankton	115,079	124,320	8.0
Yankton	111,098	119,425	7.5
TOTAL	417,673	443,103	6.1

REGION IV

	Jan.-Dec. 1986	Jan.-Dec. 1987	% Change
Beadle	113,351	117,797	3.9
Huron	106,276	110,241	3.7
Brown	254,796	270,350	6.1
Aberdeen	238,673	252,840	5.9
Groton	6,359	6,824	7.3
Day	23,528	24,262	3.1
Bristol	1,287	1,229	-4.5
Webey	1,447	1,631	12.7
Webster	18,563	19,120	3.0
Edmunds	14,265	14,373	0.8
Bowdle	3,068	2,954	-3.7
Hosmer	1,485	1,595	7.4
Ipswich	7,024	7,134	1.6
Roscoe	2,230	2,140	-4.0
Faulk	8,439	8,681	2.9
Faulkton	5,911	6,244	5.6
Hand	17,950	23,487	30.8
Miller	16,155	21,607	33.7
McPherson	9,398	9,442	0.5
Eureka	6,655	6,469	-2.8
Leola	2,132	2,443	14.6
Marshall	14,843	15,690	5.7
Britton	10,663	10,756	0.9
Roberts	27,944	27,797	-0.5
Sisseton	16,833	16,703	-0.8
Wilmot	3,561	3,657	2.7
Spink	25,259	26,911	6.5
Doland	1,005	1,081	7.6
Redfield	20,977	22,176	5.7
TOTAL	509,774	538,790	5.7

REGION V

	Jan.-Dec. 1986	Jan.-Dec. 1987	% Change
Buffalo	250	129	-48.4
Campbell	5,733	6,584	14.8
Herreid	3,117	3,392	8.8
Pollock	2,204	2,752	24.9
Corson	3,488	3,113	-10.8
McIntosh	938	847	-9.7
McLaughlin	1,284	1,120	-12.8
Dewey	12,874	13,835	7.5
Eagle Butte	8,431	8,774	4.1
Isabel	1,452	1,692	16.5
Timber Lake	2,155	2,456	14.0
Haakon	11,400	12,198	7.0
Philip	10,263	11,084	8.0
Hughes	102,904	108,236	5.2
Blunt	2,792	2,949	5.6
Pierre	99,244	104,099	4.9
Hyde	8,136	8,090	-0.6
Highmore	7,976	7,920	-0.7
Jones	11,769	11,901	1.1
Murdo	10,853	10,951	0.9
Lyman	13,309	13,491	1.4
Presho	3,551	3,679	3.6
Mellette	3,066	3,071	0.2
White River	2,747	2,691	-2.0
Perkins	18,343	18,523	1.0
Lemmon	14,330	14,502	1.2
Potter	14,987	15,244	1.7
Gettysburg	10,795	11,224	4.0
Hoven	3,571	3,460	-3.1
Stanley	13,426	15,498	15.4
Ft. Pierre	13,263	15,347	15.7
Sully	5,851	5,888	0.6
Onida	5,103	5,123	0.4
Tripp	35,679	38,348	7.5
Winner	34,390	36,729	6.8
Todd	9,168	9,310	1.5
Mission	8,041	8,360	4.0
Walworth	38,102	39,186	2.8
Mobridge	26,984	29,533	9.4
Selby	7,065	6,862	-2.9
Ziebach	2,051	2,077	1.3
Dupree	1,911	1,990	4.1
TOTAL	310,536	324,722	4.6

REGION VI

	Jan.-Dec. 1986	Jan.-Dec. 1987	% Change
Bennett	10,585	10,749	1.5
Martin	10,174	10,487	3.1
Butte	37,744	38,738	2.6
Belle Fchs.	29,831	32,580	9.2
Newell	5,240	5,510	5.2
Custer	27,594	30,247	9.6
Custer	25,912	28,125	8.5
Fall River	27,516	29,202	6.1
Edgemont	4,870	5,051	3.7
Hot Sprgs.	21,506	23,208	7.9
Harding	3,253	3,183	-2.2
Buffalo	2,754	2,652	-4.1
Jackson	9,776	9,194	-1.9
Kadoka	6,695	6,363	-5.0
Lawrence	104,938	115,307	10.8
Deadwood	18,970	25,342	33.6
Lead	25,597	28,794	12.5
Spearfish	48,181	57,871	20.1
Whitewood	2,401	3,196	33.1
Meade	47,654	52,009	9.1
Faith	5,111	5,503	7.7
Sturgis	35,200	37,188	5.6
Pennington	683,243	728,805	6.7
Rapid City	614,053	668,407	8.9
Wall	24,513	25,626	4.5
Shannon	4,153	4,192	0.9
Pine Ridge	581	694	19.4
Washabaugh	136	176	29.4
TOTAL	956,189	1,022,802	7.0
STATE TOTAL	3,783,198	4,035,578	6.7

South Dakota Econometric Model Highlights

SOUTH DAKOTA ECONOMETRIC MODEL
(Business Research Bureau - University of South Dakota)

SELECTED ECONOMIC INDICATORS (S.D. AND U.S.)

DESCRIPTION	1986Q3	1986Q4	1987Q1	1987Q2	1987Q3	1987Q4	1988Q1	1988Q2	1988Q3	1988Q4	1989Q1	1989Q2	ANNUAL DATA 1986	1987	1988
	ACTUAL				FORECAST										
SOUTH DAKOTA INDICATORS															
PERSONAL INCOME (MILLIONS)	$8,225	$8,597	$8,918	$8,763	$8,832	$8,970	$9,088	$9,201	$9,330	$9,482	$9,610	$9,719	$8,365	$8,871	$9,275
(% CHANGE)	-29.5	18.1	14.9	-7.0	3.1	6.3	5.2	5.0	5.6	6.5	5.4	4.5	7.0	6.1	4.6
PERSONAL INCOME (1982 $'S)	$7,183	$7,463	$7,629	$7,407	$7,465	$7,519	$7,536	$7,554	$7,580	$7,622	$7,635	$7,635	$7,323	$7,505	$7,573
(% CHANGE)	-32.4	15.6	8.9	-11.6	3.1	2.9	0.9	1.0	1.4	2.2	0.6	0.1	4.7	2.5	0.9
NONFARM PERS. INC. (MILLIONS)	$7,557	$7,619	$7,745	$7,783	$7,881	$8,054	$8,184	$8,304	$8,437	$8,570	$8,674	$8,774	$7,481	$7,866	$8,374
(% CHANGE)	6.8	3.3	6.6	2.0	5.1	8.8	6.4	5.9	6.4	6.3	4.9	4.6	4.8	5.1	6.5
NONFARM PERS. INC. (1982 $'S)	$6,600	$6,614	$6,625	$6,579	$6,662	$6,751	$6,786	$6,818	$6,854	$6,889	$6,890	$6,892	$6,549	$6,654	$6,837
(% CHANGE)	3.6	0.8	0.7	-2.8	5.1	5.3	2.1	1.9	2.1	2.1	.0	0.1	2.5	1.6	2.7
WAGES & SALARIES (MILLIONS)	$3,834	$3,875	$3,946	$3,935	$3,972	$4,081	$4,123	$4,171	$4,234	$4,303	$4,340	$4,383	$3,793	$3,985	$4,203
(% CHANGE)	8.7	4.3	7.3	-1.1	3.8	11.0	4.2	4.6	6.0	6.5	3.5	3.9	4.3	5.0	5.6
WAGES AND SALARIES (1982 $'S)	$3,348	$3,364	$3,376	$3,326	$3,357	$3,421	$3,419	$3,425	$3,440	$3,459	$3,447	$3,443	$3,320	$3,370	$3,436
(% CHANGE)	5.5	1.8	1.4	-5.8	3.8	7.5	-0.2	0.7	1.7	2.2	-1.3	-0.5	2.1	1.5	1.9
FARM INCOME (MILLIONS)	$668	$977	$1,172	$981	$950	$916	$904	$897	$894	$912	$936	$946	$883	$1,005	$902
(% CHANGE)	-215.6	185.0	79.8	-65.2	-12.5	-14.2	-5.4	-3.3	-1.4	8.1	10.7	4.1	30.9	13.8	-10.3
FARM INCOME (1982 $'S)	$583	$848	$1,003	$829	$803	$768	$750	$736	$726	$733	$744	$743	$773	$851	$736
(% CHANGE)	-217.0	181.5	72.9	-69.1	-12.5	-17.4	-9.6	-7.2	-5.6	3.9	5.8	-0.3	28.1	10.0	-13.5
TOTAL EMPLOYMENT (THOUSANDS)	342.3	329.0	319.0	345.5	350.5	330.4	315.7	343.7	352.1	332.7	318.1	346.1	329.0	336.3	336.1
(% CHANGE YEAR-OVER-YEAR)	1.3	2.1	3.4	2.8	2.3	0.4	-1.1	-0.5	0.5	0.7	0.8	0.7	1.2	2.2	-0.1
NONAG. EMPLOYMENT (THOUSANDS)	254.2	255.5	247.4	256.5	256.5	257.0	249.7	261.5	263.4	260.8	253.0	264.3	251.7	254.4	258.3
(% CHANGE YEAR-OVER-YEAR)	0.6	2.4	1.6	1.1	0.9	0.6	0.9	2.0	2.7	1.4	1.3	1.1	0.9	1.1	1.6
MANUFACTURING EMPLOYMENT	29.2	29.1	28.6	27.9	29.1	30.1	29.6	30.4	31.1	31.5	30.9	31.8	28.3	28.9	30.7
(% CHANGE YEAR-OVER-YEAR)	5.5	10.8	5.0	0.1	-0.3	3.3	3.5	9.3	7.0	4.7	4.6	4.5	2.9	2.0	6.1
AUTO REGISTRATIONS	5,035	3,667	4,548	4,994	4,256	4,274	4,228	4,678	4,228	4,228	4,228	4,678	4,343	4,515	4,340
(% CHANGE YEAR-OVER-YEAR)	21.3	1.2	32.0	-4.8	-15.9	16.6	-7.0	-6.3	-0.2	-1.1	0.0	0.0	7.5	3.8	-3.8
HOUSING STARTS	531	336	298	564	557	562	300	782	656	586	313	789	445	495	581
(% CHANGE YEAR-OVER-YEAR)	-20.0	24.9	39.9	-19.5	5.0	67.2	0.6	38.6	17.7	4.5	4.5	1.0	-14.3	11.2	17.3
RETAIL SALES	$2,770	$2,870	$2,416	$2,947	$3,368	$3,599	$3,259	$3,551	$3,624	$3,790	$3,443	$3,742	$2,655	$3,082	$3,556
(% CHANGE YEAR-OVER-YEAR)	3.0	1.1	6.3	8.7	21.6	25.4	34.9	20.5	7.6	5.3	5.7	5.4	0.3	16.1	15.4
UNEMPLOYMENT RATE (%)	3.7	4.8	4.9	3.7	3.8	4.6	5.7	4.6	4.2	4.7	5.0	4.7	4.7	4.3	4.3
U.S. INDICATORS															
REAL GNP (1982 $'S)	$3,718	$3,732	$3,772	$3,795	$3,836	$3,856	$3,868	$3,883	$3,904	$3,927	$3,950	$3,971	$3,713	$3,815	$3,896
(% CHANGE)	1.4	1.5	4.4	2.4	4.3	2.1	1.2	1.6	2.2	2.4	2.3	2.1	2.9	2.7	2.1
GNP DEFLATOR (1982 = 100)	114.7	114.9	116.1	117.1	117.9	119.0	120.2	121.4	122.7	124.0	125.5	126.9	114.1	117.5	122.1
(% CHANGE)	0.9	0.7	4.2	3.4	2.7	3.7	4.0	4.0	4.3	4.2	4.8	4.5	2.6	3.0	3.9
PERS. CONS. DEF. (1982 = 100)	114.5	115.2	116.9	118.3	118.3	119.3	120.6	121.8	123.1	124.4	125.9	127.3	114.2	118.2	122.5
(% CHANGE)	3.2	2.4	5.9	4.8	0.0	3.4	4.4	4.0	4.3	4.2	4.8	4.4	2.2	3.5	3.6
CONS. PRICE INDEX (1967 = 100)	328.9	330.8	335.0	339.0	342.3	344.0	346.7	349.7	353.1	356.7	360.7	364.6	328.4	340.1	351.6
(% CHANGE)	2.9	2.3	5.1	4.8	3.9	2.0	3.1	3.5	3.9	4.1	4.5	4.3	1.9	3.6	3.4
UNEMPLOYMENT RATE (%)	6.9	7.0	6.7	6.2	6.0	5.9	6.1	6.2	6.2	6.2	6.2	6.2	7.0	6.2	6.2
TREASURY BILL RATE (91 DAY)	5.5	5.3	5.5	5.7	6.0	5.9	5.9	5.9	6.1	6.3	6.4	6.5	6.0	5.8	6.1

FORECAST DATE: February 1988

SOUTH DAKOTA INCOME AND EMPLOYMENT

TOTAL PERSONAL INCOME
United States, Plains Region and States
Third Quarter 1986 - Third Quarter 1987
(Millions of Dollars, Seasonally Adjusted at Annual Rates)

	1986		1987			% Change
	3rd Qtr.	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	3rd Qtr. 1986 3rd Qtr. 1987
United States	3,548,335	3,590,277	3,660,342	3,705,166	3,757,699	5.9
Plains States	245,276	249,647	259,835	256,045	258,869	5.5
Iowa	38,062	37,855	41,998	39,296	39,632	4.1
Kansas	36,114	37,233	37,154	37,498	37,748	4.5
Minnesota	63,307	64,013	66,743	65,955	67,751	7.0
Missouri	70,202	70,925	72,489	72,740	73,944	5.3
Nebraska	21,441	21,880	23,583	23,043	22,700	5.9
North Dakota	7,925	9,144	8,963	8,755	8,367	5.6
South Dakota	8,225	8,597	8,906	8,757	8,728	6.1

Note: Detail may not add to totals because of rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

SOUTH DAKOTA NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT
December 1986 and December 1987
(In Thousands)

				Average Weekly Hours		Average Hourly Earnings	
	Dec. 1986	Dec. 1987	% Change	Dec. 1986	Dec. 1987	Dec. 1986	Dec. 1987
Total Employment	252.3	256.5	1.7				
Mining	2.5	2.4	-4.0				
Construction	8.6	9.4	9.3				
Manufacturing	28.9	30.3	4.8	41.9	43.3	$8.11	$8.15
Durable Goods	15.7	16.8	7.0	41.6	43.4	$7.95	$8.12
Fabricated Metals & Mach.	9.6	10.5	9.4				
Nondurable Goods	13.2	13.5	2.3	42.2	43.1	$8.32	$8.18
Food & Kindred Products	7.9	7.8	-1.3				
Paper, Printing & Publishing	2.9	2.9	0.0				
Transportation & Pub. Utilities	12.8	12.6	-1.6				
Transportation	7.8	7.7	-1.3				
Communication	2.8	2.7	-3.6				
Electric/Gas/Sanitary Services	2.2	2.2	0.0				
Wholesale & Retail Trade	66.1	67.0	1.4				
Wholesale Trade	16.1	16.1	0.0				
Durable Goods	7.1	7.1	0.0				
Nondurable Goods	9.0	8.9	-1.1				
Retail Trade	50.0	50.9	1.8				
Finance, Insurance & Real Estate	14.1	14.1	0.0				
Services	59.6	60.7	1.8				
Hotels, Amuse., Pers. & Business	15.2	15.7	3.3				
Medical & Health	23.3	23.5	0.9				
Educational, Membership & Social	17.8	18.1	1.7				
Government	59.7	60.0	0.5				
Federal	11.0	11.1	0.9				
State	16.4	16.3	-0.6				
State Education	8.1	7.9	-2.5				
Local	32.3	32.5	0.6				
Local Education	19.1	19.1	0.0				

Source: South Dakota Department of Labor

For further information contact Nancy Nelson

SOUTH DAKOTA AGRICULTURAL INDICATORS

PRICES RECEIVED BY FARMERS FOR COMMODITIES SOLD--SOUTH DAKOTA
Dec. 1986 and 1987

Commodity and Unit		Base Period Price 1910-1914 Average	Dec 1986	Dec 1987	Dec. 1987 Price as % of Base	Dec. 1987 Price Above or Below Dec. 1986
Wheat	Bu.	0.85	2.53	2.60	306	2.8
Corn	Bu.	0.51	1.33	1.59	312	19.5
Oats	Bu.	0.35	1.36	1.82	520	33.8
Barley	Bu.	0.59	1.25	1.44	244	15.2
Flaxseed	Bu.	1.68	3.18	3.23	192	1.6
Milk, Whsl.	Cwt.	1.82	1/	1/		
Eggs	Doz.	0.196	1/	1/		
Cattle	Cwt.	5.24	50.10	61.60	1176	23.0
Calves	Cwt.	6.08	68.60	89.90	1479	31.0
Hogs	Cwt.	7.07	50.60	40.80	577	-19.4
Sheep	Cwt.	4.24	30.20	33.60	792	11.3
Lambs	Cwt.	5.66	75.30	80.80	1428	7.3
Wool	Lb.	0.178	0.59	0.89	500	50.8

1/ Season average price only.

Source: South Dakota Crop & Livestock Reporter.

CROP PRODUCTION SUMMARY
SOUTH DAKOTA
1985, 1986, 1987
(1,000'S)

Crop	Unit	Production 1985	1986	1987
Wheat, All	Bu.	111,215	108,660	106,704
Winter	Bu.	44,080	57,600	55,080
Durum	Bu.	2,635	1,560	3,024
Other Spring	Bu.	64,500	49,500	48,600
Corn-Grain	Bu.	252,000	233,700	228,250
Corn-Silage	Tons	3,066	2,775	2,336
Sorghum-Grain	Bu.	15,000	14,030	14,310
Sorghum-Silage	Tons	403	456	365
Oats	Bu.	79,520	46,200	52,900
Barley	Bu.	32,400	35,910	34,000
Rye	Bu.	4,440	4,440	5,040
Flaxseed	Bu.	1,335	1,456	702
Potatoes (Fall)	Cwt.	2,100	2,520	2,310
Soybeans	Bu.	40,640	40,565	45,175
Hay, All	Tons	4,830	9,330	7,090
Alfalfa	Tons	3,230	6,250	5,170
All Other	Tons	1,600	3,080	1,920
Sunflowers, All	Lbs.	609,940	509,460	386,950
Oil	Lbs.	606,340	506,460	380,900
Non-oil	Lbs.	3,600	3,000	6,050

Source: South Dakota Crop & Livestock Reporter

SOUTH DAKOTA LOCAL CONDITIONS INDICATORS

SOUTH DAKOTA LOCAL CONDITIONS INDICATORS
(% Change Like Period Previous Yr.)

City	Total	Taxable Sales/1 Retail	Services	Telephone Services/2	Housing Starts/3	Postal Indicator/4	Employment•/2
Aberdeen	5.9	7.3	6.4	1.8	-5.0	1.5	1.4
Belle Fourche	9.2	11.5	3.9	-0.1			0.0
Brookings	8.4	6.8	12.8		240.9	-33.1	-0.6
Canton	-3.4	0.9	-5.3	1.7			9.6
Chamberlain	0.6	1.8	0.4	0.7			-4.7
Deadwood	33.6	36.7	-4.8	0.1			0.3
De Smet	11.0	9.9	-1.3	-0.5			3.1
Elk Point	9.4	6.3	5.9	2.3			8.7
Hot Springs	7.9	7.7	9.5				4.3
Huron	3.7	6.9	-3.0	0.6	-47.7	0.7	-0.6
Lead	12.5	43.1	32.3	1.4			-0.3
Madison	5.0	7.6	12.3	1.5	570.6		16.0
Milbank	0.8	-1.1	7.7	0.2	-14.1		-1.8
Mitchell	6.4	5.8	4.7	1.1	692.3	1.6	1.2
Mobridge	9.4	10.9	0.6	-0.2			7.7
Pierre	4.9	9.7	7.8	3.4	63.3	-8.6	6.2
Rapid City	8.9	9.5	7.1	2.4	-13.0	-7.3	-0.5
Sioux Falls	7.9	8.4	10.7	2.6	-9.9	6.0	-1.1
Spearfish	20.1	24.9	7.1		37.3		-0.3
Sturgis	5.6	6.7	1.7	3.6			-2.4
Vermillion	8.3	8.5	6.1	2.0	436.0		-3.7
Watertown	8.4	7.1	17.6	1.6	41.1	10.8	-1.1
Winner	6.8	5.4	1.9	1.3			-4.6
Yankton	7.5	6.2	1.5	2.6	-2.6	12.9	2.3

•Based on County Data

1/Percentage change for January-December 1986 and 1987.

2/Percentage change for December 1986 and 1987. Telephone data are for the number of access lines in sservice.

3/Percentage change for January-December of 1986 and 1987. Data reported for housing represent the value of housing starts.

4/Percentage change for the fourth quarter of 1986 and 1987. Included in postal indicators are: postage stock sales, postage meters for customers, meter imprint postage (3rd class regular), and second class postage.

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SOUTH DAKOTA
Business Review

BUSINESS RESEARCH BUREAU
SCHOOL OF BUSINESS - USD
414 E. CLARK STREET
VERMILLION, SOUTH DAKOTA 57069

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4520 East West Hwy
Bethesda MD 20814-0000

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CONSUMER PRICE INDEX*
United States
Jan.-Dec. 1987
(1967=100)

Item	Jan.	Feb.	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Unadjusted % Change Jan-Dec
All Items	333.1	334.4	335.9	337.7	338.7	340.1	340.8	342.7	344.4	345.3	345.8	345.7	3.8
Food & beverages	320.5	321.6	321.6	322.5	324.0	325.4	325.1	325.4	326.4	326.9	326.7	328.1	2.4
Food	328.9	330.1	330.0	331.0	332.5	334.1	333.6	333.8	334.9	335.3	335.1	336.7	2.4
Alcoholic beverages	242.5	243.2	243.6	244.3	245.0	245.9	246.7	247.3	247.8	248.4	248.9	248.8	2.6
Housing	363.9	365.1	366.4	367.7	368.9	371.3	372.5	374.9	375.4	375.2	374.9	375.3	3.1
Shelter	412.3	414.0	415.9	418.0	419.2	420.2	422.1	425.1	426.2	428.6	429.2	430.4	4.4
Renters' costs	125.3	125.8	126.4	127.1	127.3	127.9	129.3	130.1	129.8	129.4	129.2	129.1	3.0
Homeowners' costs	122.0	122.5	123.0	123.6	124.0	124.2	124.4	125.4	126.0	127.1	127.4	128.0	4.9
Fuel & other utilities	373.7	374.8	374.9	374.2	377.1	387.6	388.1	391.1	389.8	381.3	378.2	376.9	0.9
Fuel	443.7	445.1	444.6	442.0	448.7	470.8	468.9	473.6	471.6	452.6	445.9	444.3	0.1
Fuel oil, coal & btld. gas	487.9	503.2	500.6	500.5	497.7	498.6	497.9	502.3	501.0	507.0	518.8	520.2	6.6
Gas (piped) & electricity	428.8	428.9	428.7	425.9	433.3	456.8	454.8	459.4	457.4	436.6	428.4	426.6	-0.5
Other util. & Pub. Services	254.9	255.6	256.2	257.0	257.2	256.4	258.6	259.9	259.3	260.2	260.3	259.5	1.8
Household furn. & operation	253.1	253.5	254.3	255.2	254.9	254.9	255.1	255.4	255.8	255.6	255.6	255.3	0.9
Apparel & upkeep	207.1	208.4	215.2	218.7	218.0	214.5	210.5	214.7	222.2	226.3	226.4	221.1	6.8
Transportation	308.5	310.0	310.6	313.3	314.6	316.7	318.5	320.2	320.4	321.9	324.1	323.3	4.8
Private transportation	299.8	301.3	301.9	304.8	306.3	308.6	310.5	312.0	312.1	313.8	316.0	315.1	5.1
Public transportation	438.9	439.8	441.4	440.8	439.6	438.1	438.3	442.8	445.1	442.0	444.8	445.3	1.5
Medical care	449.6	452.4	455.0	457.3	458.9	461.3	464.1	466.1	467.8	469.8	471.7	472.9	5.2
Entertainment	278.3	278.7	279.8	281.3	282.0	282.3	283.5	283.9	285.2	287.1	288.1	288.5	3.7
Other goods and services	358.1	359.7	360.3	361.1	362.0	362.9	365.1	366.6	373.9	375.5	376.1	376.9	5.2

*Consumer Price Index for all Urban Consumers

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

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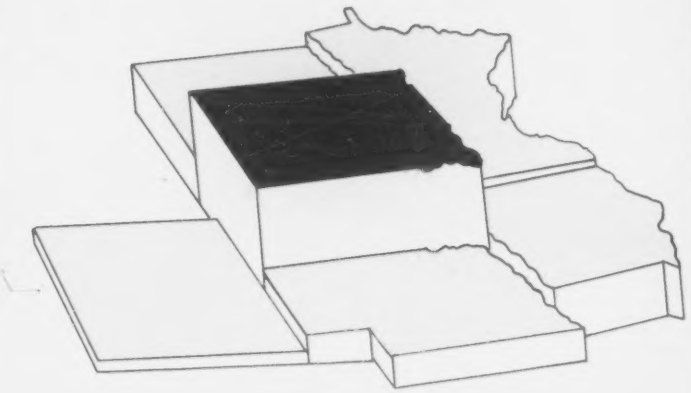

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General Indicators	Latest Quarter	SOUTH DAKOTA Latest Quarter	SOUTH DAKOTA Year Ago	SOUTH DAKOTA Percent Change	UNITED STATES Latest Quarter	UNITED STATES Year Ago	UNITED STATES Percent Change
Personal Income ($ Mil.)	1987-4	9,547	8,593	11.1	3,844,771	3,589,223	7.1
Farm Prop. Income ($ Mil.)	1987-4	1,452	900	61.3	46,842	34,073	37.5
Non-ag Employment (Thous.)	1988-1	251	248	1.2	104,259	101,133	3.1
Unemployment Rate (%)	1988-1	4.2	5.2	-19.2	6.1	7.1	-14.1
Total Employment (Thous.)	1988-1	330	325	1.5	112,489	109,592	2.6

Note: All U.S. data seasonally adjusted except for the unemployment rate and total employment. For South Dakota only personal income and farm proprietors' income are seasonally adjusted.

THE SOUTH DAKOTA ECONOMY: A HISTORICAL PERSPECTIVE

Ralph J. Brown

Introduction

South Dakota's economy is small, open, and heavily dependent upon agriculture. Because of its openness, physical capital, labor, and financial resources flow freely across its borders. This, combined with the increased integration of regional financial markets, has greatly increased the linkages between the state and national economies. Because of its small size, South Dakota's economy is dominated by forces beyond its control. Many important variables affecting the state's economy such as interest rates,

Continued on page 4

About the Author: Ralph J. Brown, Ph.D, is Professor of Economics at the School of Business, The University of South Dakota, Vermillion, South Dakota.

The author wishes to express his appreciation to Brian Brown and Nancy Palmer for their contributions to this article.

PERSONAL INCOME 1985 and 1986

Nancy Nelson and Guy Childs

Introduction

According to data recently released by the Bureau of Economic Analysis (BEA) within the U.S. Department of Commerce, total personal income in South Dakota rose more rapidly than income in the seven Plains states and in the nation. South Dakota's total personal income for 1987 was estimated at $9 billion, an increase of 6.2 percent over 1986, while income in the Plains region and the nation rose 5.2

Continued on page 8

About the Authors: Nancy Nelson is an Economic Analyst at the Business Research Bureau, The University of South Dakota, Vermillion, South Dakota. Guy Childs, Office Assistant at the Business Research Bureau, The University of South Dakota, is a recent accounting graduate from the USD School of Business.

Nancy Palmer's contributions to this article are very much appreciated.

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TREND OF BUSINESS

United States Economy

Gross national product (GNP), which measures the market value of the output of goods and services produced by the nation's economy, rose 5.4 percent in the first quarter of 1988. Real GNP (adjusted for price changes) rose 3.9 percent for this period.

On a seasonally adjusted basis, the U.S. unemployment rate fell two-tenths of one percent to 5.6 percent in the first quarter of 1988 compared to the fourth quarter of 1987. Comparisons to a year ago show a healthy drop in the nation's unemployment rate (−14.1%). Nonfarm employment rose 3.1 percent over a year ago.

The seasonally adjusted consumer price index rose slightly (0.8%) in the first three months of 1988 compared to the October-December 1987 period.

South Dakota Economy

Trends in business activity in South Dakota for the most recent period available show some growth on a seasonally adjusted basis. Of the seven indicators for which quarterly data is available, only nonfarm employment and construction employment were down in the first quarter of 1988 compared to the previous period. Nonfarm employment was down 2.5 percent and construction employment fell less than 1 percent. However, compared to a year earlier, the 1988 figures were at a slightly higher level for both of these indicators (1.2 and 4 percent).

On the positive side, the unemployment rate continues to drop. Its first quarter 1988 rate of 3.7 percent was well below last quarter's rate of 4.3 percent. Warming weather in South Dakota generally causes upturns in several sectors, particularly in the seasonal industries including construction and some sectors of the service industry.

Personal income rose nearly 10 percent in the fourth quarter of 1987 compared to the previous quarter. The volatile farm sector strongly affected this increase. Farm proprietors' income jumped 113 percent in the fourth quarter of 1987 compared to the third quarter. Its erratic behavior results mainly to the crop subsidy payments for harvested crops.

New car and truck registrations both increased in the first quarter of 1988 compared to the fourth quarter of 1987. Car registrations have averaged an 8.5 percent increase during each period since the third quarter of 1987. New truck registrations rose nearly 1[illegible] percent in the first quarter of 1988.

Further comparison[illegible] included in the graphs on the following page.

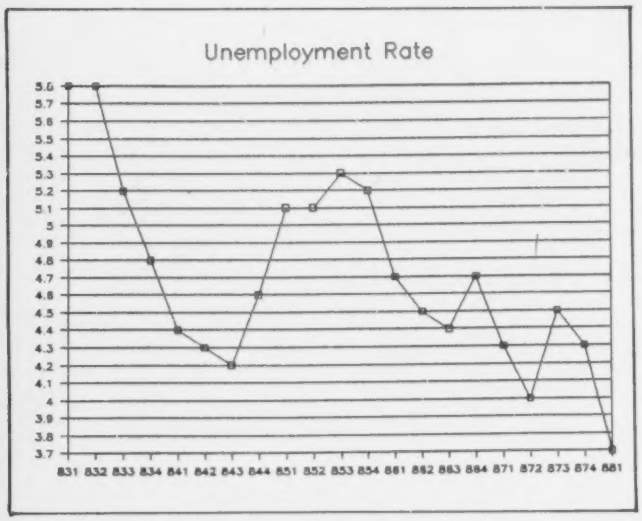
[illegible] Business Indices
[illegible]7-1988
[illegible]justed (1982=100)

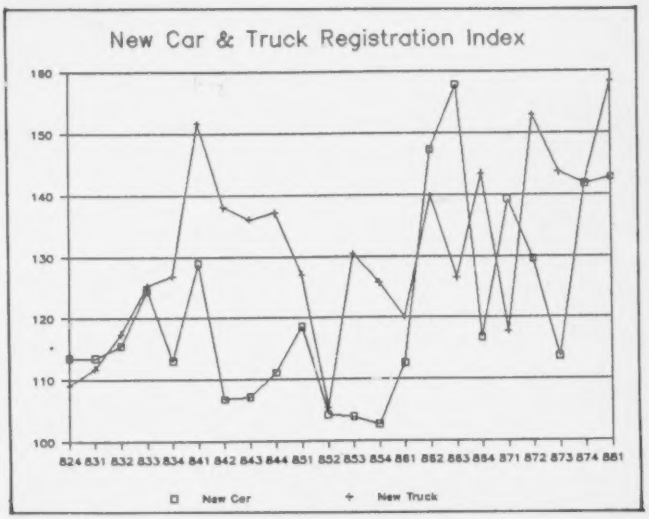
	1[illegible] 4th [illegible]	[illegible] qt	1987 2nd qtr	3rd qtr	4th qtr	1988 1st Qtr
Personal Income	113.[illegible]	[illegible]	109.9	109.5	120.0	—
Farm Proprietors' Income	191.7	[illegible]9	147.1	138.6	295.4	—
Non-ag Employment	110.2	[illegible]	111.4	111.1	112.0	109.2
Construction Employment	120.2	[illegible]9	[illegible]6.1	123.3	130.1	129.1
Unemployment Rate (%)	4.7	[illegible]	4.0	4.5	4.3	3.7
New Cars	116.8	139.3	129.5	113.7	141.7	142.7
New Trucks	143.4	117.8	152.9	143.6	141.8	158.3

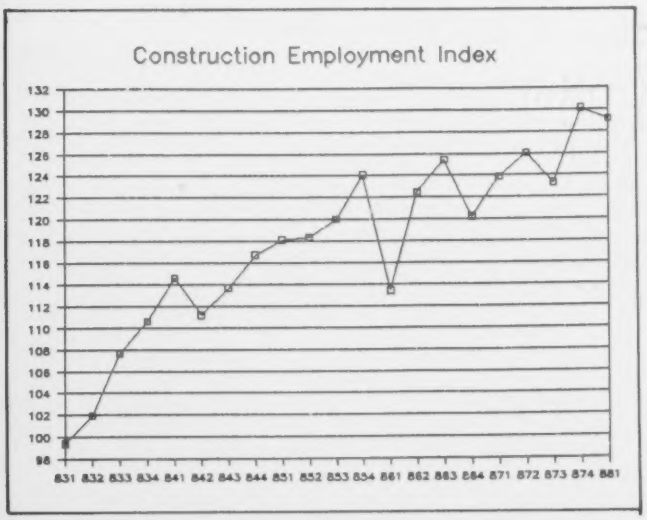
SOUTH DAKOTA BUSINESS & ECONOMIC INDICES

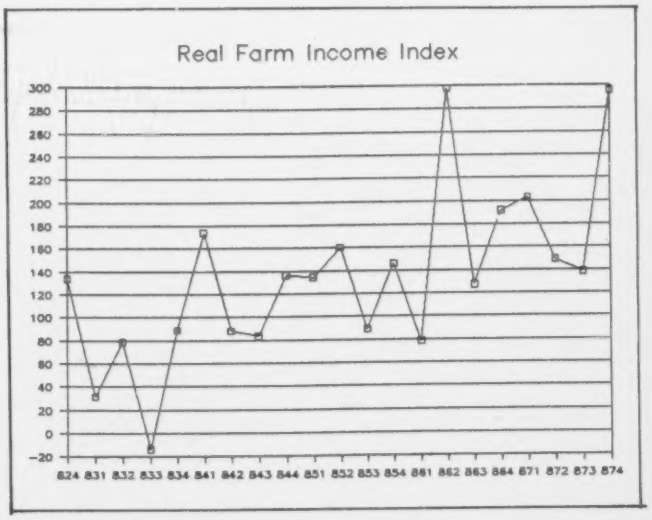
Quarterly Data 1982-1988

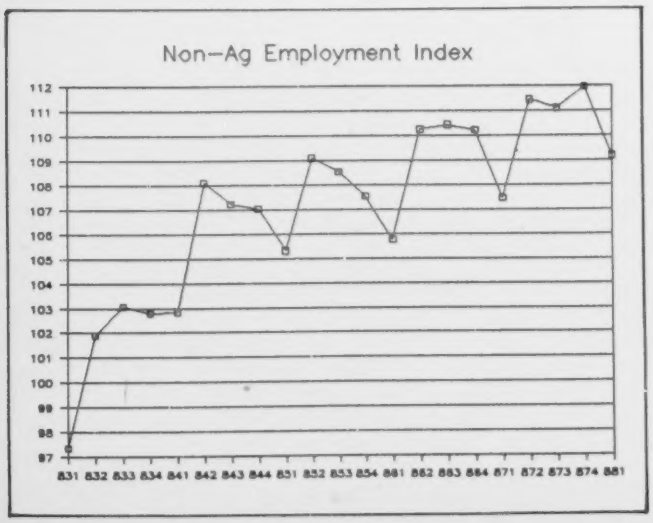
Adjusted for Seasonal Variation

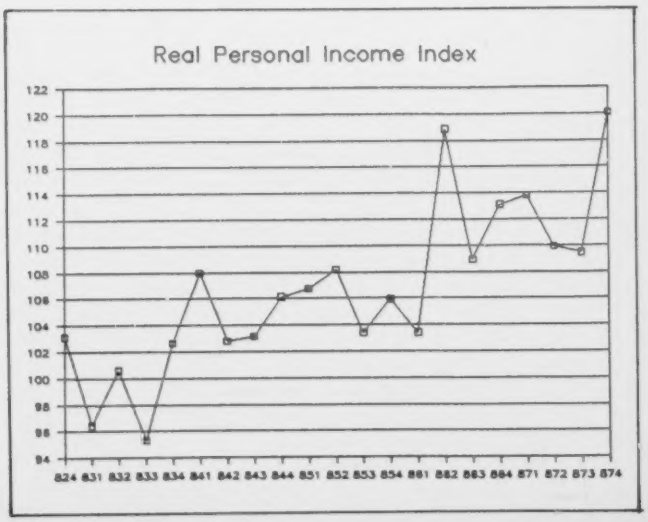












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inflation, recessions, changing consumer patterns, and the value of the dollar are determined in national and international markets. The reaction of South Dakota's economy to changes in these economic variables is more in tune with the national economy than in the past.

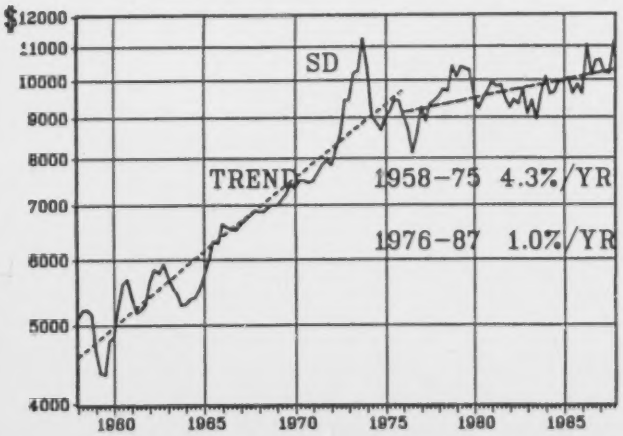
This article reviews the state's recent economic trends of income and employment and compares them with those at the national level. Examination of these trends shows that the South Dakota economy is becoming more sensitive to national economic developments; the farm economy is declining in importance as the economy becomes more diversified, and manufacturing and financial services have been the fastest growing nonfarm sectors.

Trends of Income

The trend of real per capita personal income[1] in South Dakota is presented in Figure 1. Real per capita personal income grew over the 1958-1987 period from approximately $5,000 in 1958 to about $11,000 in 1987. It should also be noted that personal income was quite volatile during this period with significant deviations from the upward trend. The major reason for this volatility is South Dakota's heavy dependence on agricultural income, which tends to be more variable than nonfarm income. The greatest deviation from the trend occurred in 1973, the year following the first Russian wheat export agreement which sharply increased agricultural prices. A negative deviation occurred in 1976, the year of a major drought. From 1958 to 1975, the growth rate of real per capita personal income was 4.3 percent per year, while, over the 1976 to 1987 period, it grew at a rate of only 1 percent per year. This roughly corresponds with the slower real income growth trends that also occurred at the national level during this same time period.[2]

FIGURE 1

TREND OF REAL PER CAPITA INCOME: SD



Examination of Figure 2 indicates that with the exception of 1973, South Dakota income was always lower than the national level. It should also be noted that South Dakota personal income was more volatile than the nation's income over the 1958-1987 time period. This again relates to South Dakota's heavier dependence on agricultural income. A common measure of a state's relative standard of living is the ratio of its per capita income to that of the nation's. South Dakota's ratio of per capita income to the nation's was 77 percent in 1958 and hovered around the low 80 percent levels in the 1980's. However, a more accurate picture of the standard of living may be obtained by adjusting the per capita personal income data by taxes and geographic differences in the cost-of-living. In 1987, per capita disposable personal income in South Dakota was 87 percent of the U.S. average and the geographic cost-of-living index[3] for South Dakota is 91 percent of the U.S. average. Adjusting per capita personal income for these two variables indicates that South Dakota's real per capita disposable income is approximately 96 percent of the U.S. average.

FIGURE 2

REAL PER CAPITA PERSONAL INCOME

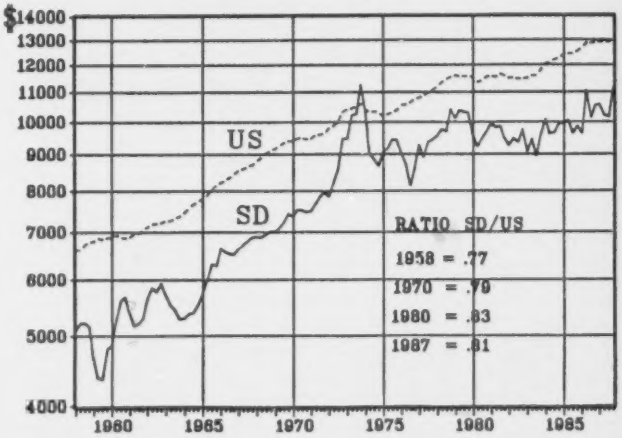


Figure 3 presents trends for South Dakota and United States real per capita personal income indexed where 1958 = 100 to allow comparisons of growth trends over time. For instance, by 1973 the index of South Dakota real per capita personal income was 222 or 122 percent higher than the 1958 level of income. In comparison, the index of United States income was 158 or only 58 percent above the level of 1958 in 1973. As indicated in Figure 3, during most of the 1970's, the index of income for South Dakota was above that of the index of the United States. Again, this does not mean that South Dakota has higher income levels, but rather that South Dakota's real income had grown faster than the United States' since 1958. This is also true for much of the 1980's. For the year 1987, the index of real per capita income in South Dakota was 207 or 2.07 times the level of 1958, while for the nation, the index was 1.96 times the level of 1958.

FIGURE 3

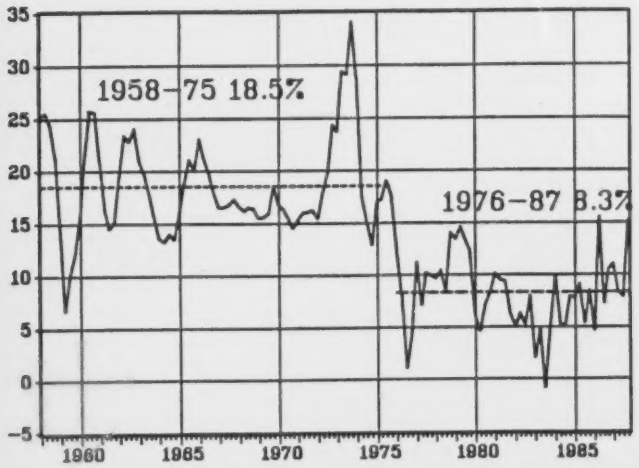
INDEX OF REAL PER CAPITA PER. INC.

The Importance of the Farm Sector

In terms of its dependence on agriculture, South Dakota is the most agricultural state in the union. Nevertheless, over the years, South Dakota has become less dependent on agriculture. As shown in Figure 4, the share of total income accounted for by agriculture never rose above 15 percent and approximately 19 percent during the 1960's and first-half of the 1970's. However, from 1975 the share of total income accounted by agriculture never rose above 15 percent and averaged 8.3 percent. Many are surprised by the small share of total income accounted for by agriculture, but this measure actually understates the importance of agriculture. Agriculture has many forward and backward linkages that greatly enhance its impact on the state's economy. Forward linkages include those industries that use agricultural outputs as inputs in further processing. These include meatpacking, grainmilling, and dairy industries. Examples of backward linkages include those industries that supply inputs to the agricultural sector such as fertilizer, processed feed, seed, machinery, fuel and lubricants, and transportation. These industries depend on the agriculture sector as a source of demand for their output.

FIGURE 4

PERCENT OF INCOME – FARM SECTOR

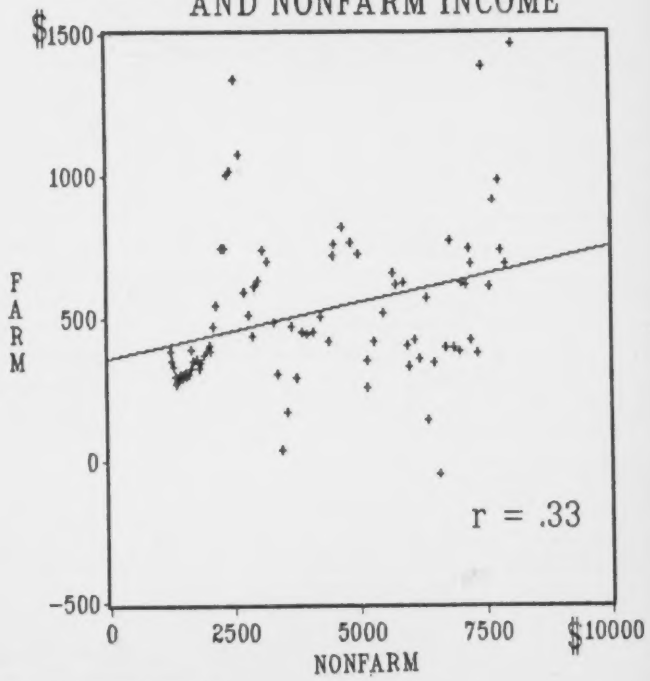


Another way of presenting the impact of agriculture on the economy is to examine the ratio of farm production expenses to total personal income. Over the 1981-86 time period, farm production expenses averaged 40 percent of personal income in South Dakota and only 5 percent of personal income for the nation. This measure of the importance of agriculture provides dramatic evidence on the relative greater reliance on agriculture in South Dakota.

One question that arises is the dependence of the nonfarm sector on the agricultural sector. The conventional wisdom is that what happens in the farm sector determines what happens in the nonfarm sector. The truth of the matter is that the relationship between performance in both sectors is quite weak. A scattergram showing the relationship between farm and nonfarm income is presented in Figure 5. As shown in this figure, the relationship is weak with a correlation coefficient of only 0.33. One of the problems is that farm income is so variable that spending decisions by farmers are not so much linked to their actual current income as they are to a long-run view of income. Consequently, spending by farmers on inputs and for personal expenses is far less variable than their incomes. This means that the nonfarm sector is not as sensitive to fluctuations in farm income.

FIGURE 5

RELATIONSHIP BETWEEN FARM AND NONFARM INCOME

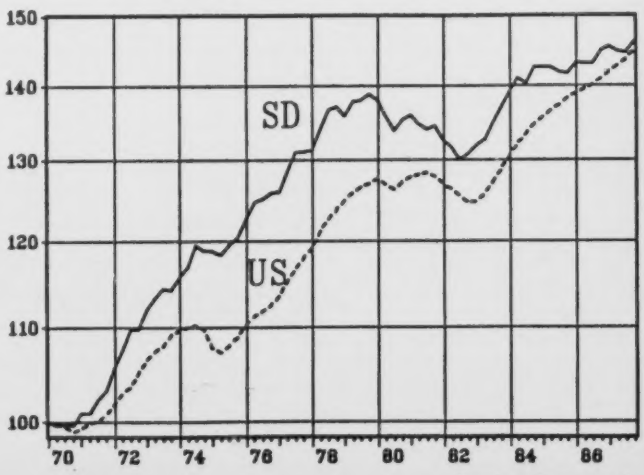


Employment Trends

Trends in the index of nonagricultural employment for both South Dakota and the United States are presented in Figure 6.[4] As shown, both the state and nation have followed approximately the same cyclical pattern in the recessions of 1973-1975, 1980, and 1981-1982, with a reduction in employment. Over the 1970 to 1987 time period, nonagricultural employment in both South Dakota and the United States increased approximately 45 percent. However, throughout most of that time period, the growth rate for South Dakota exceeded that of the United States. Only in the early 1980's did employment growth at the national level exceed that of South Dakota's.

FIGURE 6

INDEX OF NON–AG EMPLOYMENT



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Is the South Dakota economy becoming more sensitive to national economic cycles? Goods-producing industries such as manufacturing, mining, and construction tend to be more cyclically sensitive, while service-producing industries such as services, trade, government, and public utilities tend to have smaller fluctuations over the cycle. Figure 7 presents indices of the level of employment in both goods-producing and service-producing industries. Over the 1970-1987 period, employment in goods-producing industries rose by 70 percent, while employment in service-producing industries grew about 40 percent. This means a greater proportion of South Dakota nonagricultural employment is engaged in goods-producing activities in 1987 as compared to 1970. Examination of this figure also indicates that employment in goods-producing is much more cyclically sensitive than employment in the service sector. The major source of this employment growth took place in manufacturing. Figure 8 presents indexes of manufacturing employment in both the South Dakota and national economy. Manufacturing growth in South Dakota almost doubled over the 1970-87 time period, while at the national level, it fell slightly. As a result of these trends, South Dakota is becoming more like the national economy in terms of industrial mix.

FIGURE 7

GOODS VS SERVICE PRODUCING JOBS

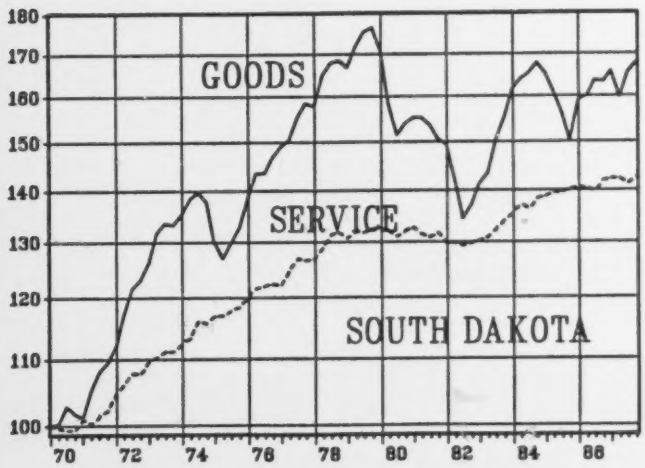


FIGURE 8

MANUFACTURING EMPLOYMENT INDEXES

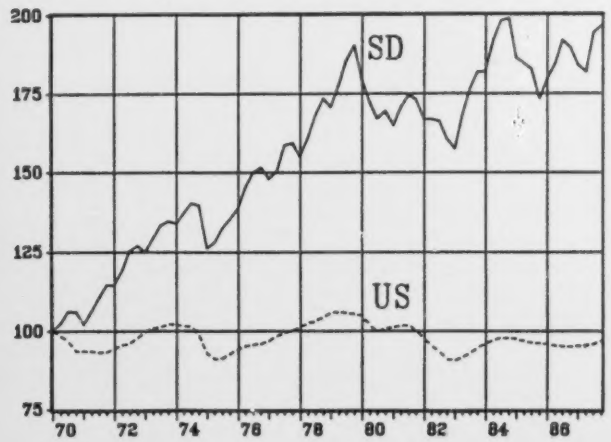


Figure 9 is a two-scale graph where goods-producing employment in thousands for South Dakota is plotted on the left scale and for the United States on the right scale. As indicated, the cyclical trends for both are similar. Figure 10 shows that the South Dakota unemployment rate is always lower than national rates, but follows the same cyclical patterns.

FIGURE 9

GOODS PRODUCING US AND SD (THOUSANDS)

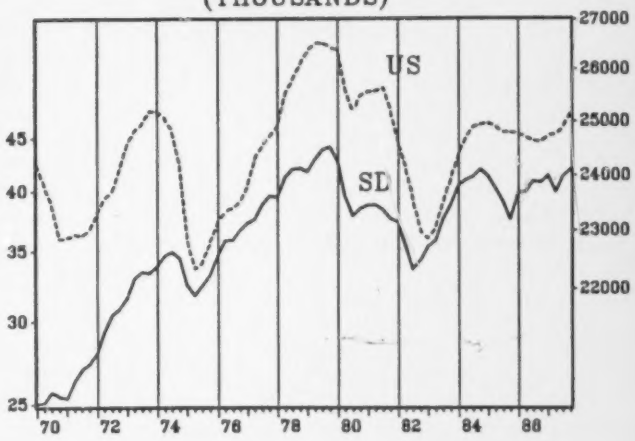
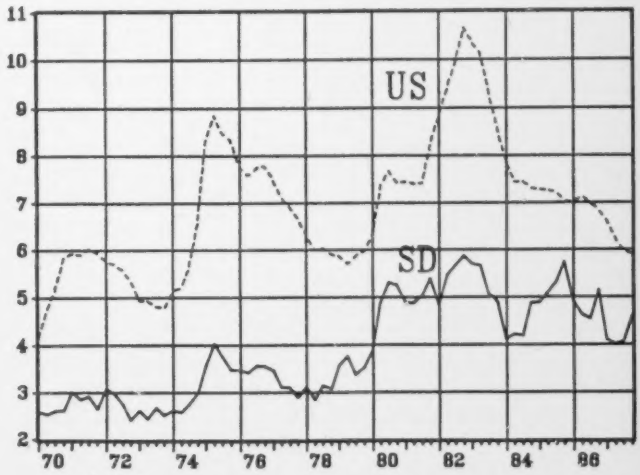


FIGURE 10

UNEMPLOYMENT RATE – SD AND US



Sector and Industry Trends

Table 1 indicates the proportionate sources of income in South Dakota for the years 1960, 1970, 1980, and 1987. The percentage of total income from labor compensation fluctuated around the 50 percent level over this time period. The contribution of total proprietors' income decreased in the 20-year period from 1960 to 1980 from 31 to 14 percent. This decrease is primarily due to the reduced importance of farm proprietors' income. Transfer payments have become an increasing source of income in South Dakota since 1960, when their total share was only 7 percent. In 1987, transfer payments accounted for 15 percent of personal income. The importance of dividend, interest, and rent income rose significantly between 1970 and 1980 from 15 to 21 percent. Since 1987 it has declined somewhat, primarily due to lower interest rates.

TABLE 1

Sources of Income in S.D.

% of total

Source	1960	1970	1980	1987
Labor Compensation	47	51	62	47
Proprietors' Income	31	23	14	20
Non-Farm	9	8	7	10
Farm	22	15	7	10
Transfer Payments	7	11	13	15
Div Int & Rent	14	15	21	17

Source: U.S. Dept of Commerce

Table 2 compares proportionate sources of income in South Dakota with the nation for 1987. The chief differences in income contributions between the state and nation occur in labor compensation and farm income. Sixty-two percent of national income in 1987 came from labor compensation compared to 47 percent in South Dakota. Farm income contributed only a one percent share to national personal income. Income shares from other sources were almost identical for both economies.

TABLE 2

Sources of Income: 1987

% of total

Source	S.D.	U.S.
Labor Compensation	47	62
Proprietors' Income	20	8
Non-Farm	10	7
Farm	10	1
Transfer Payments	15	14
Div, Int,& Rent	17	16

Source: U.S. Dept of Commerce

Table 3 shows the percentage of total earnings in South Dakota by industry for 1960, 1970, 1980, and 1987. The leading sources of earnings in South Dakota have been farming, government, services, and trade. The total contribution of farm earnings has declined significantly over a period of 27 years. Proportionate earnings from the services industry have increased the most. In 1960, only ten percent of total South Dakota earnings came from services, but by 1987, the industry contributed 19 percent, a share larger than that of any of the other industries.

TABLE 3

Earnings by Industry in S.D.

% of total

Industry	1960	1970	1980	1987
Construction	7	5	7	5
Farm	31	23	12	17
Fin Insur& RE	4	4	5	6
Government	17	20	19	18
Manufacturing	7	8	10	10
Mining	1	1	2	2
Services	10	13	17	19
Trade	18	19	20	16
Trans& Pub Util	6	7	8	7

Source: U.S. Dept. of Commerce

Table 4 compares the proportionate earnings by industry in South Dakota with those of the United States for 1987. As was the case in South Dakota, the services industry made the largest contribution to total earnings with a 23 percent share. The other leading contributors were government, trade, and manufacturing. Farming constituted about 2 percent of total earnings for the United States, far less than the 17 percent share that existed in South Dakota.

TABLE 4

Earnings by Industry 1987

% of total

Industry	S.D.	U.S.
Construction	5	6
Farm	17	2
Finance Insur&RE	6	8
Government	18	16
Manufacturing	10	21
Mining	2	1
Services	19	23
Trade	16	16
Trans & Pub Util	7	7

Source: U.S. Dept of Commerce

Conclusion

Examination of long-term trends in per capita personal income indicates that both the state and national economies grew at approximately the same rates over the 1958-87 time period. Examination of trends in industrial mix indicates that South Dakota's reliance on agriculture is lessening, while its reliance on manufacturing is increasing. In fact, manufacturing has been one of the fastest-growing employment sectors in South Dakota. That trend increases the state's sensitivity to fluctuations in the national economy. While the service sector has been growing in the South Dakota economy, it constitutes only 19 percent of total income in the state as compared to 23 percent nationally. South Dakota's share of income derived from labor compensation is only about 50 percent of the total as compared to 62 percent for the nation. On the other hand, proprietors' income accounts for about a 20 percent share of South Dakota income and a 10 percent share for the nation. This is partly due to the greater importance of agriculture, but it is also the case in nonfarm proprietors' income.

FOOTNOTES

[1] Personal income data is published by the Regional Economic Measurement Division, Bureau of Economic Analysis, U.S. Department of Commerce.

[2] The national economy's growth rate peaked in 1973. The South Dakota economy's higher growth trend continued into 1975 due to the strength of the agricultural economy from 1973 to 1975.

[3] Kent Halstead, **Cost of Living, Equilibrium Wages, and the Cost of Government: City and State Indexes**, U.S. Department of Education, Office of Educational Research and Improvements, Unpublished manuscript.

[4] Data on employment trends in South Dakota is published by the South Dakota Department of Labor and United States trends are published by the U.S. Department of Labor.

Continued from page 1.

and 5.8 percent, respectively.

Per capita income in South Dakota also rose faster than the Plains region and national averages, but is still the lowest among the Plains states. The newly released data also show that farm income rose 46 percent from 1984 to 1986, while non-farm income increased 8.6 percent during the same 2-year period. The greatest increase in non-farm income for the 1985 to 1986 period came in the finance, insurance and real estate sectors (9.2%).

The BEA had delayed the release of 1985 and 1986 county income data in order to complete benchmark revision work and to expand the industry detail available for the county earnings estimates from the 1-digit to the 2-digit Standard Industrial Classifications (SIC) code. Aggregate data for state personal income is available through 1987.

Since personal income primarily represents payments to individuals for productive services rendered, this data series serves as a useful indicator for measuring changes in productive forces caused by fluctuating market conditions. Annual county estimates for the years 1969 to 1986 are now available in the following categories:

1. total personal income by major source and earnings by major industry;
2. full-time and part-time employees by major industry;
3. transfer payments;
4. farm income and expenses; and,
5. regional economic profile (includes income, population, earnings, and employment data).

It should be noted that these estimates will vary from previous reports because of updates in information.

Definitions

Personal income is defined as the income received by persons from all sources less personal contributions for social insurance. According to the regional and economic accounts, "persons" are defined as individuals, non-profit institutions, private trust funds and private non-insured welfare funds.

The components of personal income are defined as follows:

1. **Wage and Salary Disbursements:** Monetary compensation for employees and corporate officers; tips, commissions, bonuses and any payments-in-kind which constitute income to the recipient;
2. **Other Labor Income:** Employer contributions to privately administered pension and welfare funds and other small items such as directors' fees and compensation of prison inmates;
3. **Proprietors' Income:** Monetary income and income-in-kind of sole proprietorships, partnerships and tax-exempt cooperatives;
4. **Personal Dividend Income:** Dividends received by persons from all sources;
5. **Rental Income of Persons:** Monetary income of persons derived from the rental of real property;
6. **Personal Interest Income:** Interest income received by persons from all sources;
7. **Transfer Payments:** Payments to persons who do not currently render their services in the U.S. economy.

Total and Per Capita Personal Income

Table I provides a ten-year comparison of total personal income for the 7 states in the Plains Region and for the United States. South Dakota's total personal income in 1987 was nearly $9 billion. This represents a 6.2 percent increase in personal income in the state between 1986 and 1987 compared to a 5.2 percent increase for the Plains Region and a 5.8 percent gain for the United States during the same period.

In Table II, per capita personal income is shown for the Plains States and the United States. The per capita income figure is derived by dividing the total personal income figure by the state's population estimate. At $12,511 for 1987, South Dakota's per capita personal income is the lowest in the 7 state region and has been for the last 10 years.

Table I
Total Personal Income By States In Plains Region
(Millions of Dollars)
1978-1987

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987P
IOWA	24,196	26,518	27,811	31,553	31,569	31,790	34,763	36,163	38,114	40,218
KANSAS	19,033	21,795	23,565	26,736	28,459	29,471	31,789	33,865	35,646	37,021
MINNESOTA	33,009	37,257	41,103	45,303	47,734	50,027	55,824	59,257	63,175	67,010
MISSOURI	37,679	42,141	45,779	50,982	53,723	57,091	62,525	66,554	70,503	74,179
NEBRASKA	12,421	13,852	14,589	16,862	17,576	17,987	19,778	20,913	21,930	22,867
NORTH DAKOTA	5,007	5,464	5,590	6,710	7,070	7,361	7,930	8,190	8,447	8,777
SOUTH DAKOTA	4,861	5,555	5,680	6,398	6,590	6,760	7,483	7,813	8,357	8,873
PLAINS REGION	136,206	152,582	164,116	184,543	192,722	200,485	220,093	232,754	246,172	258,946
UNITED STATES	1,806,968	2,028,510	2,254,076	2,514,231	2,663,432	2,834,385	3,101,163	3,320,346	3,528,589	3,733,719

P=Preliminary Estimate

Table II
Per Capita Personal Income By Plains States
(Dollars)
1978-1987

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987P
IOWA	8289	9091	9537	10812	10857	10945	11972	12554	13375	14191
KANSAS	8159	9285	9941	11190	11811	12137	13022	13830	14494	14952
MINNESOTA	8243	9226	10062	11016	11549	12069	13409	14142	14995	15783
MISSOURI	7735	8619	9298	10322	10868	11500	12494	13221	13923	14537
NEBRASKA	7958	8854	9274	10652	11055	11266	12323	13034	13727	14341
NORTH DAKOTA	7695	8378	8538	10149	10520	10804	11549	11961	12449	13061
SOUTH DAKOTA	7051	8062	8217	9249	9489	9673	10613	11035	1181[illegible]	12511
PLAINS REGION	7999	8924	9534	10670	11108	11510	12570	13262	14011	14684
UNITED STATES	8136	9033	9919	10949	11480	12098	13114	13908	14636	15340

P=Preliminary Estimate

Source: Regional Economic Information System
Bureau of Economic Analysis

Table III indicates that South Dakota's total personal income in 1987 grew at a rate of 6.2 percent over 1986, exceeding the rate of growth in the United States by 0.4 percent. South Dakota's rate of growth also surpassed that of the other Plains States by a full percentage point. And, for the 1986-1987 period, South Dakota's per capita personal income rose 5.9 percent, exceeding both the Plains Region and United States averages by 1.1 percent. Iowa was the only state in the Plains Region recording a higher growth rate at 6.1 percent.

Table III
Percent Changes in Per Capita and Total Personal Income
Plains States

	% Change in Total Personal Income 1978-1987	% Change in Total Personal Income 1986-1987	% Change in Per Capita Income 1978-1987	% Change in Per Capita Income 1986-1987
IOWA	66.2	5.5	71.2	6.1
KANSAS	94.5	3.9	83.3	3.8
MINNESOTA	103.0	6.1	91.5	5.3
MISSOURI	96.9	5.2	87.9	4.4
NEBRASKA	84.1	4.3	80.2	4.5
NORTH DAKOTA	75.3	3.9	69.7	4.9
SOUTH DAKOTA	82.5	6.2	77.4	5.9
PLAINS REGION	90.1	5.2	83.6	4.8
UNITED STATES	106.6	5.8	88.5	4.8

Source: Tables I and II

During the 1986 to 1987 period, the consumer price index (CPI) increased by 3.7 percent. Because inflation impacts personal income purchases, the following table adjusts personal income for inflation in order to provide an assessment of the changes in real income for South Dakotans. Adjusted for changes in the CPI, total personal income in South Dakota increased 2.4 percent from 1986 to 1987, roughly half of the increase reported in the state from 1985 to 1986.

Table IV
Total Personal Income in South Dakota
Current and 1967 Dollars
(1967=100)
1978-1987

	In Current Dollars	% Change From Previous Year	In 1967 Dollars	% Change From Previous Year
1978	4,861	20.9	2,488	12.3
1979	5,555	14.3	2,555	2.7
1980	5,680	2.3	2,301	-9.9
1981	6,398	12.6	2,349	2.1
1982	6,590	3.0	2,279	-3.0
1983	6,760	2.6	2,265	-0.6
1984	7,483	10.7	2,405	6.2
1985	7,813	4.4	2,425	0.8
1986	8,357	7.0	2,545	4.9
1987	8,873	6.2	2,607	2.4

Source: Bureau of Economic Analysis, U.S. Dept. of Labor

Total Disposable Personal Income

Disposable personal income is defined as that income remaining to persons after tax and non-tax payments. It is the amount which individuals can use either to make personal outlays or to save. For the 1986 to 1987 period, South Dakota's total disposable personal income rose by 5.7 percent compared to 4.5 percent for the Plains Region and 5.1 percent for the United States. However, from 1978 to 1987, the rate of South Dakota's total disposable personal income growth fell below that in the Plains States and the nation. During that ten-year period, South Dakota averaged an 8.3 percent annual increase compared to 9.0 percent for the Plains Region and 10.5 percent for the United States.

Table VI includes per capita disposable personal income for the United States and Plains States. South Dakota's per capita disposable income rose by 5.5 percent from 1986 to 1987. For the same period, the Plains Region and the United States showed a 4.1 percent increase. Again, despite the larger growth rate, South Dakota has consistently lagged the other Plains States in the amount of its per capita disposable personal income.

Table VII compares per capita disposable personal income as a percent of per capita personal income. For the ten-year period 1978 to 1987, South Dakota has maintained the highest percentage of total to disposable income in comparison to the averages of the other Plains States and the nation. That percentage reflects the low tax rates on personal income in South Dakota.

Major Sources of Personal Income

Table VIII summarizes the major sources of South Dakota personal income for the years 1984 through 1986. Comparison of the various components by type indicates that increases in proprietors' income (19.4%) far outpaced hikes in wage and salary earnings (4.3%). Of all proprietors' income, farm income grew by 34 percent, while non-farm income rose only 8.1 percent. Further analysis of the non-farm private income shows a slight decline of 0.3 percent in wholesale trade for the 1985-86 period. Major sectors show-

Table V
Total Disposable Personal Income
U.S. and Plains States
(Millions of Dollars)
1978-1987

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987P
IOWA	20,664	22,443	23,364	26,511	26,587	27,021	30,083	31,256	33,002	34,549
KANSAS	16,328	18,502	19,882	22,289	23,720	24,896	27,139	28,633	30,236	31,148
MINNESOTA	27,752	31,048	34,356	37,641	39,667	41,718	47,079	49,809	53,650	56,560
MISSOURI	32,408	36,046	39,160	43,375	45,266	49,025	53,832	57,502	61,081	63,862
NEBRASKA	10,693	11,795	12,385	14,451	14,726	15,457	17,291	18,324	19,219	19,939
NORTH DAKOTA	4,380	4,795	4,804	5,633	6,140	6,419	7,103	7,265	7,517	7,755
SOUTH DAKOTA	4,383	5,014	5,061	5,705	5,820	6,052	6,721	7,104	7,597	8,032
PLAINS REGION	116,609	129,644	139,013	155,605	161,926	170,588	189,248	199,893	212,303	221,843
UNITED STATES	1,546,470	1,724,566	1,914,331	2,121,830	2,255,123	2,424,880	2,662,051	2,835,626	3,017,588	3,170,278

Table VI
Per Capita Disposable Personal Income
U.S. and Plains States
(Dollars)
1978-1987

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987P
IOWA	7,079	7,694	8,012	9,084	9,144	9,303	10,360	10,851	11,581	12,190
KANSAS	6,999	7,882	8,388	9,329	9,844	10,253	11,117	11,693	12,294	12,580
MINNESOTA	6,930	7,689	8,410	9,153	9,597	10,065	11,309	11,887	12,734	13,321
MISSOURI	6,653	7,372	7,954	8,782	9,157	9,875	10,757	11,423	12,063	12,515
NEBRASKA	6,851	7,540	7,873	9,129	9,262	9,682	10,774	11,421	12,030	12,505
NORTH DAKOTA	6,732	7,353	7,339	8,520	9,137	9,422	10,345	10,610	11,078	11,540
SOUTH DAKOTA	6,359	7,277	7,322	8,247	8,379	8,659	9,531	10,032	10,738	11,325
PLAINS REGION	6,848	7,583	8,076	8,997	9,333	9,793	10,809	11,390	12,084	12,580
UNITED STATES	6,963	7,680	8,424	9,240	9,721	10,350	11,257	11,878	12,516	13,025

Source: Regional Economic Information System
Bureau of Economic Analysis

Continued on page 10.

Continued from page 9.

ing growth included finance, insurance and real estate--9.2 percent; construction—7.9 percent; manufacturing—7.8 percent; agricultural services, forestry, fisheries—7.6 percent; services—6.9 percent; and government—4.1 percent.

Table VII
Per Capita Disposable Personal Income As A Percentage of Per Capita Personal Income
U.S. and Plains States
1978-1987

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987P
IOWA	85.4	84.6	84.0	84.0	84.2	85.0	86.5	86.4	86.6	85.9
KANSAS	85.8	84.9	84.4	83.4	83.3	84.5	85.4	84.5	84.8	84.1
MINNESOTA	84.1	83.3	83.6	83.1	83.1	83.4	84.3	84.1	84.9	84.4
MISSOURI	86.0	85.5	85.5	85.1	84.3	85.9	86.1	86.4	86.6	86.1
NEBRASKA	86.1	85.2	84.9	85.7	83.8	85.9	87.4	87.6	87.6	87.2
NORTH DAKOTA	87.5	87.8	86.0	83.9	86.9	87.2	89.6	88.7	89.0	88.4
SOUTH DAKOTA	90.2	90.3	89.1	89.2	88.3	89.5	89.8	90.9	90.9	90.5
PLAINS REGION	85.6	85.0	84.7	84.3	84.0	85.1	86.0	85.9	86.2	85.7
UNITED STATES	85.6	85.0	84.9	84.4	84.7	85.6	85.8	85.4	85.5	84.9

P=Preliminary estimate
Source: Regional Economic Information System
Bureau of Economic Analysis

Table VIII
South Dakota Personal Income by Major Sources
(Thousands of Dollars)
1984-1986

Income by Place of Residence	1984	1985	1986	% Change 1986/85
Total Personal Income	$7,483,422	$7,813,337	$8,356,663	7.0
Nonfarm	$6,880,480	$7,136,636	$7,474,600	4.7
Farm	$602,942	$676,701	$882,063	30.3
Derivation of Total Personal Income				
Earnings by Place of Work	$5,078,883	$5,349,973	$5,788,802	8.2
Less: Personal Contributions for Social Insurance	$301,371	$332,042	$350,924	5.7
Plus: Adjustment for Residence;	$8,669	$12,175	$8,426	-30.8
Dividends, Interest, Rent;	$1,481,741	$1,508,362	$1,565,665	3.8
Transfer Payments	$1,215,500	$1,274,869	$1,344,694	5.5
Earnings by Place of Work				
Wages and Salaries	$3,496,181	$3,635,572	$3,792,107	4.3
Other Labor Income	$319,930	$326,200	$339,435	4.1
Proprietors' Income	$1,262,772	$1,388,201	$1,657,260	19.4
Farm	$529,526	$602,233	$807,281	34.0
Nonfarm	$733,246	$785,968	$849,979	8.1
Earnings by Industry				
Farm	$602,942	$676,701	$882,063	30.3
Nonfarm	$4,475,941	$4,673,272	$4,906,739	5.0
Private	$3,517,071	$3,663,169	$3,854,945	5.2
Agriculture Services, Forestry, Fisheries and Other	$46,948	$37,724	$40,609	7.6
Mining	$86,053	$88,445	$92,065	4.1
Construction	$277,635	$293,678	$316,833	7.9
Manufacturing	$539,188	$533,413	$575,074	7.8
Nondurable Goods	$246,810	$242,832	$265,100	9.2
Durable Goods	$292,378	$290,581	$309,974	6.7
Transportation & Pub. Utilities	$419,953	$424,527	$432,306	1.8
Railroad Transportation	$33,212	$29,278	$27,685	-5.4
Trucking & Warehousing	$212,505	$208,336	$216,213	3.8
Water Transportation	(L)	$78	$148	89.7
Other Transportation	$26,704	$26,911	$28,438	5.7
Communication	$77,831	$81,651	$79,723	-2.4
Electric, Gas & Sanitary Serv.	$69,678	$78,273	$80,099	2.3
Wholesale Trade	$347,088	$350,508	$349,454	-0.3
Retail Trade	$567,141	$587,513	$601,800	2.4
Finance, Insurance & Real Estate	$265,495	$293,340	$320,225	9.2
Banking	$140,540	$159,097	$165,847	4.2
Other Finance, Ins. & Real Estate	$124,955	$134,243	$154,378	15.0
Services	$967,570	$1,054,021	$1,126,579	6.9
Hotels & Other Lodging Places	$29,718	$31,286	$32,153	2.8
Personal Services	$58,429	$72,435	$76,921	6.2
Private Households	$15,573	$15,626	$15,974	2.2
Business Services	$94,615	$112,576	$121,897	8.3
Auto Repair, Services & Garages	$52,397	$56,224	$59,126	5.2
Miscellaneous Repair Services	$28,976	$24,011	$24,913	3.8
Amusement & Recreation Services	$16,983	$18,537	$19,633	5.9
Motion Pictures	$2,277	$2,470	$2,443	-1.1
Health Services	$417,773	$448,510	$476,582	6.3
Legal Services	$53,059	$58,306	$64,198	10.1
Educational Services	$41,274	$41,670	$43,235	3.8
Social Services	$33,239	$36,812	$44,744	21.5
Museums, Botanicals, Zoological Gardens	$69	$72	$77	6.9
Membership Organizations	$56,440	$57,845	$59,451	2.8
Miscellaneous Services	$66,748	$77,641	$85,232	9.8
Government and Government Enterprises	$958,870	$1,010,103	$1,051,794	4.1
Federal, Civilian	$239,816	$250,468	$256,396	2.4
Federal, Military	$135,699	$140,050	$147,000	5.0
State and Local	$583,355	$619,585	$648,398	4.7

Source: Bureau of Economic Analysis, U.S. Department of Commerce.
(L) Less thhan $50,000
Note: Summing individual items may not equal totals due to rounding.

The distribution of industrial sources of income is further summarized in Table IX and Chart I. Services, government and the farm sectors continue to rank as the top three sources of personal income in South Dakota.

County Personal and Per Capita Income

The final two tables present total personal and per capita income by county. At $1.67 billion, Minnehaha county had the largest total personal income in the state, an increase of 12% from 1984 to 1986. Sully county ranked first in per capita income with an average of $21,265 for each of its residents in 1986. Shannon and Todd continue to have the lowest per capita income in South Dakota with $3,855 and $6,648 respectively.

Table IX
Percentage Distribution of Total Personal Income
From Industrial Sources in South Dakota
1984-1986

	1984		1985		1986	
	Amount	% of Total	Amount	% of Total	Amount	% of Total
Total Wages & Salaries, Labor & Proprietor's Income	$5,078,883	100.0	$5,349,973	100.0	$5,788,802	100.0
Farm	$602,942	11.9	$676,701	12.6	$882,063	15.2
Agriculture Services, Forestry, Fisheries and Other	$46,948	0.9	$37,724	0.7	$40,609	0.7
Mining	$86,053	1.7	$88,445	1.7	$92,065	1.6
Construction	$277,635	5.5	$293,678	5.5	$316,833	5.5
Manufacturing	$539,188	10.6	$533,413	10.0	$575,074	9.9
Transportation & Pub. Utilities	$419,953	8.3	$424,527	7.9	$432,306	7.5
Wholesale Trade	$347,088	6.8	$350,508	6.6	$349,454	6.0
Retail Trade	$567,141	11.2	$587,513	11.0	$601,800	10.4
Finance, Insurance & Real Estate	$265,495	5.2	$293,340	5.5	$320,225	5.5
Services	$967,570	19.1	$1,054,021	19.7	$1,126,579	19.5
Government and Government Enterp	$958,870	18.9	$1,010,103	18.9	$1,051,794	18.2

Source: Compiled from Table VIII
Note: Summing individual items may not equal totals due to rounding.

CHART I

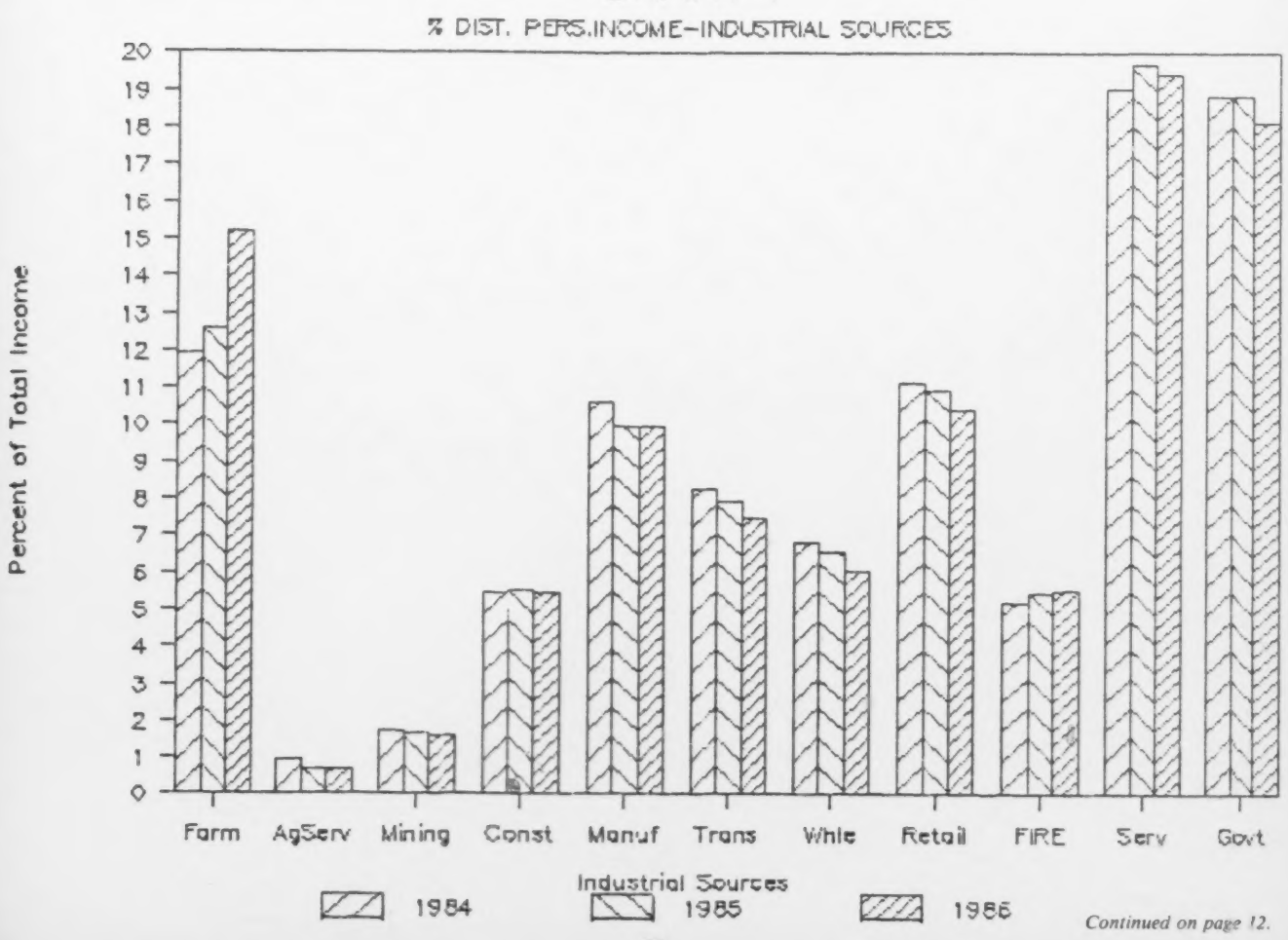


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Table X
County Total Personal Income
South Dakota Counties
(Millions of Dollars)
1984-1986

SOUTH DAKOTA	1984	1985	1986	1986 Rank
Aurora	$ 28.4	$ 28.6	$ 33.6	53
Beadle	210.0	220.6	229.4	7
Bennett	27.9	25.1	31.7	55
Bon Homme	68.7	77.7	81.2	27
Brookings	232.0	253.1	264.3	4
Brown	421.8	453.6	476.1	3
Brule	54.1	55.2	61.1	36
Buffalo	9.9	9.6	11.4	66
Butte	84.9	79.2	87.9	24
Campbell	26.0	19.2	27.0	59
Charles Mix	84.3	90.0	96.3	21
Clark	57.3	64.3	66.2	32
Clay	120.1	138.0	141.7	13
Codington	224.3	234.6	248.8	5
Corson	36.1	29.4	37.0	52
Custer	69.2	71.2	75.9	28
Davison	189.4	198.4	210.3	10
Day	86.5	84.2	89.4	23
Deuel	41.7	45.8	50.5	41
Dewey	39.4	34.1	41.9	44
Douglas	32.4	32.9	37.4	51
Edmunds	50.2	43.9	56.1	38
Fall River	88.5	89.1	91.0	22
Faulk	38.8	32.8	40.2	49
Grant	92.2	99.0	104.2	19
Gregory	56.4	54.1	62.7	35
Haakon	37.1	28.5	38.8	50
Hamlin	49.3	51.8	53.8	39
Hand	54.4	52.6	62.9	34
Hanson	24.1	28.3	28.9	57
Harding	19.6	12.7	19.9	64
Hughes	176.8	180.5	187.6	11
Hutchinson	81.6	97.2	101.4	20
Hyde	20.9	15.9	22.1	62
Jackson	$ 25.1	$ 17.2	$ 26.4	60
Jerauld	24.0	24.9	27.8	58
Jones	23.7	18.7	20.5	63
Kingsbury	65.9	75.6	74.4	30
Lake	105.7	120.1	126.4	15
Lawrence	200.6	208.4	218.7	9
Lincoln	149.0	176.4	176.2	12
Lyman	40.7	32.2	41.6	45
Marshall	58.8	68.3	63.8	33
McCook	57.7	65.9	68.4	31
McPherson	35.4	30.8	40.2	48
Meade	209.0	209.5	230.9	6
Mellette	17.1	15.5	19.4	65
Miner	32.7	36.5	40.4	47
Minnehaha	1495.5	1589.7	1677.5	1
Moody	62.6	74.2	74.5	29
Pennington	874.0	906.0	964.6	2
Perkins	57.2	50.9	60.6	37
Potter	47.7	40.1	52.7	40
Roberts	95.2	108.1	108.2	17
Sanborn	26.1	30.5	31.1	56
Shannon	45.0	46.4	49.2	42
Spink	114.3	121.0	126.2	16
Stanley	29.9	28.3	32.5	55
Sully	41.1	33.6	40.9	46
Todd	43.3	41.5	45.5	43
Tripp	76.9	68.6	83.0	26
Turner	87.4	107.7	108.2	18
Union	110.0	135.8	131.1	14
Walworth	80.1	73.4	83.9	25
Yankton	196.2	208.2	220.6	8
Ziebach	21.2	17.8	22.7	61

Source: Regional Economic Information System
Bureau of Economic Analysis

Table XI
County Per Capita Personal Income
South Dakota Counties
(Dollars)
1984-1986

SOUTH DAKOTA	1984	1985	1986	1986 Rank
Aurora	$8,025	$8,380	$10,075	51
Beadle	11,354	12,004	12,539	15
Bennett	8,401	7,575	9,411	57
Bon Homme	9,956	11,340	11,992	23
Brookings	9,288	10,263	10,737	46
Brown	11,463	12,354	12,980	11
Brule	9,967	10,070	11,132	39
Buffalo	5,925	5,576	6,976	64
Butte	10,191	9,634	10,680	47
Campbell	11,403	8,474	12,201	20
Charles Mix	8,853	9,537	10,254	50
Clark	11,563	13,203	13,736	6
Clay	9,022	10,554	11,068	42
Codington	10,171	10,495	11,077	41
Corson	7,070	5,776	7,349	63
Custer	10,338	10,359	10,941	44
Davison	10,577	11,226	12,054	22
Day	10,869	10,638	11,383	33
Deuel	8,005	9,053	10,018	52
Dewey	7,215	6,214	7,641	62
Douglas	8,238	8,367	9,429	56
Edmunds	10,201	8,797	11,318	34
Fall River	11,168	11,368	11,737	24
Faulk	12,294	10,633	13,070	9
Grant	9,792	10,762	11,686	28
Gregory	9,489	9,289	10,920	45
Haakon	12,887	9,911	13,892	4
Hamlin	9,374	9,919	10,259	49
Hand	11,326	11,054	13,514	8
Hanson	7,281	8,590	8,812	59
Harding	10,897	7,100	11,218	36
Hughes	11,991	12,124	12,599	13
Hutchinson	9,003	10,925	11,722	27
Hyde	10,540	8,194	11,538	31
Jackson	$7,440	$5,087	$7,838	61
Jerauld	8,592	8,742	9,910	53
Jones	15,809	12,594	13,825	5
Kingsbury	10,111	11,707	11,727	26
Lake	9,913	11,087	11,678	29
Lawrence	10,533	10,810	11,247	35
Lincoln	10,448	12,243	12,271	19
Lyman	10,533	8,447	11,181	38
Marshall	11,271	13,284	12,680	12
McCook	9,281	10,681	11,208	37
McPherson	9,327	8,293	11,013	43
Meade	9,279	9,088	9,842	55
Mellette	7,418	6,712	8,463	60
Miner	9,112	10,344	11,659	30
Minnehaha	12,615	13,084	13,675	7
Moody	9,190	10,989	11,105	40
Pennington	11,579	11,864	12,544	14
Perkins	12,169	10,834	13,068	10
Potter	12,785	10,746	14,332	2
Roberts	8,716	9,853	9,854	54
Sanborn	8,517	9,985	10,261	48
Shannon	3,979	3,708	3,855	66
Spink	12,739	13,583	14,123	3
Stanley	11,937	11,020	12,173	21
Sully	21,815	18,247	21,265	1
Todd	5,987	6,121	6,648	65
Tripp	10,647	9,482	11,529	32
Turner	9,602	12,117	12,449	18
Union	10,285	12,998	12,527	16
Walworth	11,858	10,941	12,491	17
Yankton	10,267	10,989	11,734	25
Ziebach	8,622	7,159	9,023	58

Source: Regional Economic Information System
Bureau of Economic Analysis

TAXABLE SALES
Counties and Selected Cities in South Dakota
January-February, 1987 and 1988
(In $000's)

REGION I

	Jan.-Feb. 1987	Jan.-Feb. 1988	% Change
Brookings	16,645	18,359	10.3
Brookings	15,351	16,854	9.8
Elkton	333	401	20.4
Volga	480	585	21.9
Clark	1,393	1,481	6.3
Clark	1,042	1,120	7.5
Codington	24,008	25,840	7.6
Watertown	23,271	24,897	7.0
Deuel	2,245	2,802	24.8
Clear Lake	1,694	2,184	28.9
Gary	129	168	30.2
Toronto	284	319	12.3
Grant	6,045	6,205	2.6
Big Stone C.	410	411	0.2
Milbank	5,328	5,472	2.7
Hamlin	1,605	1,784	11.2
Bryant	371	394	6.2
Castlewood	184	207	12.5
Estelline	452	523	15.7
Hayti	301	374	24.3
Lake Norden	142	159	12.0
Kingsbury	2,947	3,024	2.6
Arlington	829	780	-5.9
De Smet	1,327	1,376	3.7
Lake Preston	347	379	9.2
Lake	6,615	7,104	7.4
Madison	6,146	6,642	8.1
Miner	1,233	1,430	16.0
Howard	964	1,132	17.4
Moody	4,558	5,230	14.7
Colman	2,963	3,528	19.1
Flandreau	1,454	1,534	5.5
TOTAL	67,295	73,257	8.9

REGION II

	Jan.-Feb. 1987	Jan.-Feb. 1988	% Change
Clay	7,737	8,319	7.5
Vermillion	6,979	7,319	4.9
Lincoln	5,235	5,360	2.4
Canton	2,090	1,943	-7.0
Lennox	1,055	1,106	4.8
McCook	2,440	2,556	4.8
Bridgewater	345	359	4.1
Canistota	258	254	-1.6
Salem	1,497	1,613	7.7
Minnehaha	144,075	153,288	6.4
Baltic	375	441	17.6
Brandon	889	953	7.2
Colton	327	354	8.3
Dell Rapids	1,398	1,603	14.7
Garretson	741	786	6.1
Hartford	346	431	24.6
Sioux Falls	135,232	143,766	6.3
Turner	3,539	3,921	10.8
Centerville	468	518	10.7
Marion	1,477	1,597	8.1
Parker	564	635	12.6
Union	4,126	4,684	13.5
Alcester	1,366	1,486	8.8
Beresford	1,391	1,456	4.7
Elk Point	857	941	9.8
TOTAL	167,153	178,127	6.6

REGION III

	Jan.-Feb. 1987	Jan.-Feb. 1988	% Change
Aurora	1,693	1,951	15.2
Plankinton	1,198	1,355	13.1
Bon Homme	3,375	3,838	13.7
Avon	686	778	13.4
Scotland	604	737	22.0
Springfield	440	505	14.8
Tabor	725	856	18.1
Tyndall	854	917	7.4
Brule	3,474	3,640	4.8
Chamberlain	2,685	2,794	4.1
Kimball	650	705	8.5
Charles Mix	4,697	5,001	6.5
Geddes	135	159	17.8
Lake Andes	841	966	14.9
Platte	1,986	2,097	5.6
Wagner	1,606	1,625	1.2
Davison	18,414	19,838	7.7
Mitchell	17,799	19,409	9.0
Douglas	1,682	1,931	14.8
Armour	817	946	15.8
Corsica	624	745	19.4
Gregory	2,803	3,066	9.4
Burke	684	730	6.7
Gregory	1,376	1,595	15.9
Hanson	752	777	3.3
Alexandria	484	505	4.3
Emery	237	241	1.7
Hutchinson	4,561	5,105	11.9
Freeman	1,853	2,106	13.7
Hanso	647	704	8.8
Parkston	1,413	1,631	15.4
Tripp	424	456	7.5
Jerauld	1,168	1,364	16.8
Wess. Sprgs.	1,046	1,166	11.5
Sanborn	767	889	15.9
Woonsocket	599	683	14.0
Yankton	17,134	17,763	3.7
Yankton	16,575	16,866	1.8
TOTAL	60,519	65,164	7.7

REGION IV

	Jan.-Feb. 1987	Jan.-Feb. 1988	% Change
Beadle	16,237	17,572	8.2
Huron	15,370	16,575	7.8
Brown	40,652	37,509	-7.7
Aberdeen	38,156	34,749	-8.9
Groton	990	1,040	5.1
Day	3,270	3,895	19.1
Bristol	168	215	28.0
Waubay	184	199	8.2
Webster	2,629	3,138	19.4
Edmunds	2,033	2,204	8.4
Bowdle	416	454	9.1
Hosmer	195	210	7.7
Ipswich	1,115	1,212	8.7
Roscoe	250	263	5.2
Faulk	1,103	1,230	11.5
Faulkton	800	865	8.1
Hand	2,515	2,869	14.1
Miller	2,292	2,628	14.7
McPherson	1,207	1,298	7.5
Eureka	840	868	3.3
Lacla	310	354	14.2
Marshall	1,903	2,304	21.1
Britton	1,350	1,605	18.9
Roberts	3,834	4,168	8.7
Sisseton	2,386	2,577	8.0
Wilmot	483	548	13.5
Spink	3,571	3,982	11.5
Doland	132	130	-1.5
Redfield	2,954	3,248	10.0
TOTAL	76,326	77,032	0.9

REGION V

	Jan.-Feb. 1987	Jan.-Feb. 1988	% Change
Buffalo	11	15	36.4
Campbell	818	928	13.4
Herreid	475	498	4.8
Pollock	285	365	28.1
Corson	441	454	2.9
McIntosh	125	148	18.4
McLaughlin	177	163	-7.9
Dewey	1,898	2,074	9.3
Eagle Butte	1,271	1,373	8.0
Isabel	196	190	-3.1
Timber Lake	337	366	8.6
Meakon	1,793	1,800	0.4
Philip	1,647	1,660	0.8
Hughes	15,224	16,198	6.4
Blunt	420	496	18.1
Pierre	14,668	15,517	5.8
Hyde	1,184	1,280	8.1
Highmore	1,163	1,261	8.4
Jones	1,353	1,621	19.8
Murdo	1,268	1,503	18.5
Lyman	1,548	1,584	2.3
Oacoma	639	649	1.6
Presho	437	410	-6.2
Wallette	425	464	9.2
White River	379	400	5.5
Perkins	2,539	2,737	7.8
Lemmon	1,978	2,098	6.1
Potter	1,881	2,006	6.6
Gettysburg	1,331	1,425	7.1
Mowen	472	517	9.5
Stanley	1,830	1,935	5.7
Ft. Pierre	1,812	1,917	5.8
Sully	811	876	8.0
Onida	772	811	5.1
Tripp	5,096	5,470	7.3
Winner	4,824	5,319	10.2
Todd	1,583	1,620	2.3
Mission	1,392	1,435	3.1
Walworth	5,526	5,722	3.5
Mobridge	3,939	4,360	10.7
Selby	1,030	1,133	10.0
Ziebach	289	295	2.1
Dupree	273	286	4.8
TOTAL	44,248	47,079	6.4

REGION VI

	Jan.-Feb. 1987	Jan.-Feb. 1988	% Change
Bennett	1,644	1,721	4.7
Martin	1,607	1,705	6.1
Butte	5,116	5,387	5.3
Belle Fche.	4,209	4,391	4.3
Newell	831	922	11.0
Custer	2,764	2,969	7.4
Custer	2,594	2,791	7.6
Fall River	3,721	3,867	3.9
Edgemont	685	723	5.5
Hot Sprgs.	2,914	3,019	3.6
Harding	374	412	10.2
Buffalo	305	348	14.1
Jackson	896	939	4.8
Kadoka	724	791	9.3
Lawrence	14,507	16,204	11.7
Deadwood	3,010	3,063	1.8
Lead	3,662	5,230	42.8
Spearfish	7,433	7,501	0.9
Whitewood	313	332	6.1
Meade	6,246	6,779	8.5
Faith	707	807	14.1
Sturgis	4,542	4,718	3.9
Pennington	90,716	91,042	0.4
Rapid City	84,813	86,198	1.6
Wall	2,695	2,974	10.4
Shannon	670	624	-6.9
Pine Ridge	100	165	65.0
Washabaugh	14	42	200.0
TOTAL	126,667	129,989	2.6
STATE TOTAL	542,208	570,647	5.2

SOUTH DAKOTA INCOME AND EMPLOYMENT

TOTAL PERSONAL INCOME
United States, Plains Region and States
Fourth Quarter 1986--Fourth Quarter 1987
(Millions of Dollars, Seasonally Adjusted at Annual Rates)

	1986	1987				% Change
	4th Qtr.	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	4th Qtr. 1986 4th Qtr. 1987
United States	3,589,223	3,652,506	3,688,315	3,749,283	3,844,771	7.1
Plains States	250,068	256,290	252,924	254,780	271,788	8.7
Iowa	37,962	40,295	38,382	38,541	43,655	15.0
Kansas	36,812	36,503	36,617	36,630	38,335	4.1
Minnesota	64,184	66,108	65,542	66,661	69,731	8.6
Missouri	71,564	72,930	73,211	74,092	76,485	6.9
Nebraska	21,840	22,669	21,935	21,926	24,938	14.2
North Dakota	9,112	9,019	8,669	8,320	9,098	-0.2
South Dakota	8,593	8,765	8,566	8,612	9,547	11.1

Note: Detail may not add to totals because of rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

SOUTH DAKOTA NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT
March 1987 and March 1988
(In Thousands)

				Average Weekly Hours		Average Hourly Earnings	
	March 1987	March 1988	% Change	March 1987	March 1988	March 1987	March 1988
Total Employment	249.1	252.9	1.5				
Total Private	189.3	193.1	2.0	33.0	32.8	$7.14	$7.30
Mining	2.4	2.4	0.0	40.7	40.1	12.85	12.43
Construction	7.5	7.8	4.0	36.3	35.9	9.98	9.96
Manufacturing	28.0	29.8	6.4	42.2	41.0	8.00	8.00
Durable Goods	15.2	16.5	8.6				
Fabricated Metals & Mach.	9.5	10.4	9.5				
Nondurable Goods	12.8	13.3	3.9				
Food & Kindred Products	7.3	7.6	4.1				
Paper, Printing & Publishing	2.7	2.8	3.7				
Transportation & Pub. Utilities	12.3	12.3	0.0	36.8	37.7	10.20	10.04
Transportation	7.2	7.3	1.4				
Communication	2.8	2.8	0.0				
Electric/Gas/Sanitary Services	2.2	2.2	0.0				
Wholesale & Retail Trade	64.5	65.8	2.0	30.5	31.1	6.13	6.24
Wholesale Trade	16.3	16.6	1.8				
Durable Goods	7.2	7.4	2.8				
Nondurable Goods	9.1	9.2	1.1				
Retail Trade	48.2	49.2	2.1				
Finance, Insurance & Real Estate	14.2	14.1	-0.7	35.7	34.9	6.97	7.34
Services	60.3	60.9	1.0	29.8	28.9	6.40	6.75
Hotels, Amuse., Pers. & Business	15.9	16.1	1.3				
Medical & Health	23.4	23.6	0.9				
Educational	4.7	4.6	-2.1				
Social	4.4	4.5	2.3				
Membership	8.6	8.8	2.3				
Government	59.8	59.8	0.0				
Federal	10.7	10.7	0.0				
State	16.2	16.1	-0.6				
State Education	7.9	7.8	-1.3				
Local	32.9	33.0	0.3				
Local Education	20.0	19.9	-0.5				

Source: South Dakota Department of Labor

For further information contact Nancy Nelson

SOUTH DAKOTA AGRICULTURAL INDICATORS

SOUTH DAKOTA PROSPECTIVE PLANTINGS
MARCH 1988
(000's Acres)

Crop	Acreage Planted (Actual) 1986	1987	Intentions 1988 1/
All Corn	3,300	3,100	3250
All Sorghum	450	360	300
Oats	1,500	1,400	1500
Barley	930	870	700
Soybeans	1,350	1,400	1700
Flaxseed	110	55	35
Durum Wheat	65	110	150
Other Spring Wheat 2/	2,100	1,850	1600
All Sunflowers	380	300	270
All Hay 3/	4,700	3,950	4200

1/Intended plantings in 1988 as indicated by reports from farmers.
2/Other than durum.
3/Harvested acreage.

Source: South Dakota Crop & Livestock Reporter

PRICES RECEIVED BY FARMERS FOR COMMODITIES SOLD— SOUTH DAKOTA
MARCH 1987 and 1988

		Base Period Price 1910-1914 Average	Mar 1987	Mar 1988	Mar. 1988 Price as % of Base	Mar. 1988 Price Above or Below Mar. 1987
Wheat	Bu.	.85	2.42	2.54	299	5.0
Corn	Bu.	.51	1.30	1.78	349	36.9
Oats	Bu.	.35	1.38	1.71	489	23.9
Barley	Bu.	.59	1.51	1.56	264	3.3
Flaxseed	Bu.	1.68	2.73	3.93	234	44.0
Milk, Whol.	Cwt.	1.82	1/	1/		
Eggs	Doz.	0.196	1/	1/		
Cattle	Cwt.	5.24	61.50	72.00	1374	17.1
Calves	Cwt.	6.08	76.30	94.70	1557	24.1
Hogs	Cwt.	7.07	47.50	42.20	597	-11.2
Sheep	Cwt.	4.24	29.70	27.00	637	-9.1
Lambs	Cwt.	5.66	82.60	78.40	1385	-5.1
Wool	Lb.	0.178	0.68	1.19	669	75.0

1/ Season average price only.

Source: South Dakota Crop & Livestock Reporter.

SOUTH DAKOTA LOCAL CONDITIONS INDICATORS

(% Change Like Period Previous Yr.)

City	Total	Taxable Sales/1 Retail	Services	Telephone Services/2	Housing Starts/3	Postal Indicator/4	Employment*/2
Aberdeen	8.9	-11.4	2.3	1.7	----	23.9	0.5
Belle Fourche	4.3	4.7	1.3	.1	0		-0.9
Brookings	9.8	7.8	14.2		-95.2	2.7	-2.7
Canton	-7.0	4.3	-4.1	1.5	0		1.2
Chamberlain	4.1	5.7	-5.6	3.2	----		-0.3
Deadwood	1.8	-3.6	6.4	.9	N/A		4.4
De Smet	3.7	.4	17.8	-.7	N/A		-5.3
Elk Point	9.8	8.8	5.7	2.2	N/A		7.3
Hot Springs	3.6	3.9	5.0		0		4.8
Huron	7.8	5.2	15.5	.9	0	1.9	1.0
Lead	42.8	39.1	-7.7	.1	N/A		4.4
Madison	8.1	8.3	-3.1	1.8	0		2.7
Milbank	2.7	10.6	5.8	.1	0		-1.0
Mitchell	9.0	2.4	20.6	.8	0	1.2	1.9
Mobridge	10.7	13.1	-1.1	-.7	N/A		-0.3
Pierre	5.8	5.8	16.9	2.7	-32.4	-11.1	5.4
Rapid City	1.6	.2	6.0	1.8	46.4	-8.0	4.8
Sioux Falls	6.3	4.6	16.6	2.4	74.8	11.9	2.7
Spearfish	.9	-.5	.8		-49.5		4.4
Sturgis	3.9	3.7	-1.0	2.2	N/A		1.0
Vermillion	4.9	6.0	-9.3	1.6	0		-0.3
Watertown	7.0	2.0	8.5	1.8	-85.6	18.7	2.5
Winner	10.2	6.6	6.8	1.3	N/A		-0.3
Yankton	1.8	3.5	9.5	3.5	46.9	15.2	6.1

*Based on County Data

1/Percentage change for January - February 1987 and 1988.

2/Percentage change for March 1987 and 1988. Telephone data are for the number of access lines in service.

3/Percentage change for January - March 1987 and 1988. Data reported for housing represent the value of housing starts. NA = Not available -- = value of $0.00

4/Percentage change for the first quarter of 1987 and 1988. Included in postal indicators are: postage stock sales, postage meters for customers, meter imprint postage (3rd class regular), and second class postage.

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SOUTH DAKOTA
Business Review

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4520 East West Hwy
Bethesda MD 20814-0000

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CONSUMER PRICE INDEX
United States
Jan.-March 1988
(1982-1984=100)

Item	Jan.	Feb.	March	Unadjusted % Change Jan-March
All Items	115.7	116.0	116.5	0.7
Food & beverages	115.7	115.8	116.0	0.3
Food	115.7	115.7	115.9	0.2
Alcoholic beverages	115.8	116.8	117.4	1.4
Housing	116.2	116.6	117.0	0.7
Shelter	124.6	125.0	125.6	0.8
Renters' costs	130.8	131.3	132.9	1.6
Homeowners' costs	128.5	129.0	129.2	0.5
Fuel & other utilities	102.4	102.8	102.7	0.3
Fuel	95.6	96.0	95.8	0.2
Fuel oil, coal & btld. gas	80.8	80.9	80.5	-0.4
Gas (piped) & electricity	101.5	101.9	101.7	0.2
Other util. & Pub. Services	121.3	121.8	121.7	0.3
Household furn. & operation	107.5	107.7	108.3	0.7
Apparel & upkeep	110.4	110.2	114.3	3.5
Transportation	107.1	106.8	106.5	-0.6
Private transportation	106.0	105.7	105.4	-0.6
Public transportation	121.8	120.8	121.4	-0.3
Medical care	134.4	135.5	136.3	1.4
Entertainment	118.1	118.3	119.0	0.8
Other goods and services	133.4	134.2	134.6	0.9

*Consumer Price Index for all Urban Consumers

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

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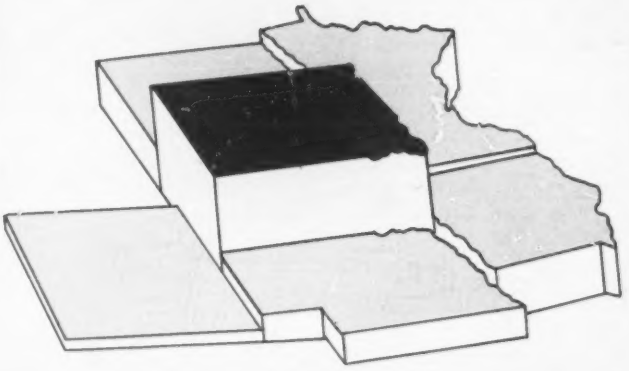

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General Indicators	Latest Quarter	SOUTH DAKOTA Latest Quarter	SOUTH DAKOTA Year Ago	SOUTH DAKOTA Percent Change	UNITED STATES Latest Quarter	UNITED STATES Year Ago	UNITED STATES Percent Change
Personal Income ($ Mil.)	1988-1	9,315	8,765	6.3	3,884,290	3,652,506	6.3
Farm Prop. Income ($ Mil.)	1988-1	1,117	967	15.5	38,322	41,841	-8.4
Non-ag Employment (Thous.)	1988-2	262	257	1.9	105,597	101,841	3.7
Unemployment Rate (%)	1988-2	3.1	3.9	-20.5	5.4	6.2	-12.9
Total Employment (Thous.)	1988-2	357	345	3.5	114,779	112,305	2.2

Note: All U.S. data seasonally adjusted except for the unemployment rate and total employment. For South Dakota only personal income and farm proprietors' income are seasonally adjusted.

A STUDY OF THE IMPACT OF DAKOTA PROPOSITION II ON PROPERTY TAX REVENUE IN SOUTH DAKOTA

By Ralph J. Brown and Raymond J. Ring

A proposed constitutional amendment to limit property taxes in South Dakota, known as the **Dakota Proposition II** (DPII) will be on the ballot in November of 1988. This proposal would limit property taxes to one percent of full and true value on agricultural property and two and one-half percent on nonagricultural property. Full and true

Continued on page 4.

About the Author:
Ralph J. Brown, Ph.D. is Professor of Economics at the School of Business, The University of South Dakota, Vermillion, South Dakota.
Raymond J. Ring, Ph.D. is Associate Professor of Economics at the School of Business, The University of South Dakota.

TAXES, SPENDING, AND DAKOTA PROPOSITION II

By Raymond J. Ring

Introduction

Taxes and government spending loom large in the debate over Dakota Proposition II. Opponents point to the state's low overall taxes and spending compared to other states while proponents point to high property tax rates. Some proponents favor even lower taxes and spending, while others want the state to use other revenue sources such as a state income tax to finance higher state aid to local governments.

Continued on page 7.

About the Author: Raymond J. Ring, Ph.D. is Associate Professor of Economics at the School of Business, The University of South Dakota, Vermillion, SD.

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TREND OF BUSINESS

United States Economy

Real GNP rose at a 3.3 percent annual rate in the second quarter of 1988, down from a 5.2 percent annual rate in the second half of 1987. Inflation, as measured by the Consumer Price Index (CPI), rose 4.0 percent in August 1988 compared to a year ago. Contributing to these recent increases is a temporary rise in food costs. Prices have also moved upward in a broad range of commodity and industry groups.

On a seasonally adjusted basis, U.S. personal income grew 6.3 percent in the first quarter of 1988 compared to this period a year ago. Farm proprietors' income fell −8.4 percent for this same period due to reductions in farm subsidy payments.

Nonfarm employment for the nation increased 3.7 percent in the second quarter of 1988 compared to this period a year ago. The unemployment rate of 5.4 percent in the second quarter of 1988 is down from last year's 6.2 percent rate. The Federal Reserve Bank of Cleveland reports that the "demand for goods and services is exceeding industrial output capacity. This, in turn, has pushed capacity utilization to high levels and brought the unemployment rate to a 14-year low."

South Dakota Economy

South Dakota's employment sector reflected gains in the second quarter of 1988 compared to first quarter data. On a seasonally adjusted basis nonfarm employment rose 4.1 percent for this period. The unemployment rate continued to move downward reaching its lowest rate since 1980 of 3.4 percent in the second quarter of 1988. Construction employment began its seasonal upswing in the second quarter of 1988 with an increase of 1.9 percent from the previous quarter and a 4.8 percent increase compared to a year ago.

Sales of new trucks were strong in the second quarter of 1988—up 4.8 percent from the first quarter. As truck sales rose, new car sales fell for this period—down −5.7 percent on a seasonally adjusted basis.

South Dakota's personal income was down −3.6 percent in the first quarter of 1988 compared to the previous quarter. A major contributor to this decline was the −24.0 percent drop in farm income due to decreases in federal agricultural subsidies.

Further comparisons of these indicators are provided in the following table and graphs.

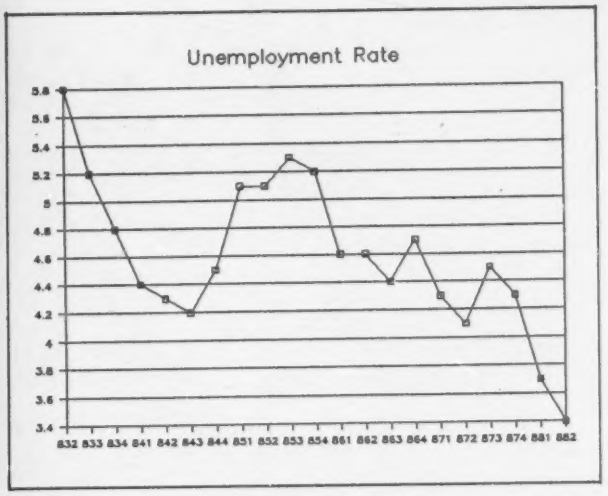
South Dakota Business Indices
1987-1988
Seasonally Adjusted (1982=100)

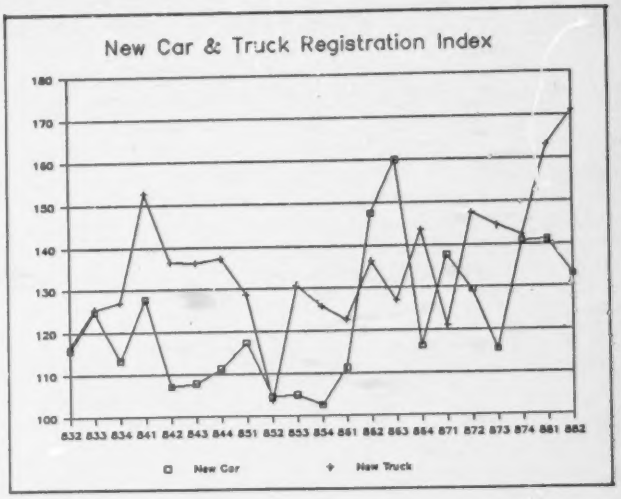
	1987				1988	
	1st qtr	2nd qtr	3rd qtr	4th qtr	1st qtr	2nd Qtr
Personal Income	113.8	109.9	109.5	120.0	115.7	---
Farm Proprietors' Income	203.2	149.1	138.6	295.4	224.5	---
Non-ag Employment	107.4	111.4	111.1	112.0	109.2	113.7
Construction Employment	124.1	125.7	123.3	130.3	129.4	131.7
Unemployment Rate (%)	4.3	4.1	4.5	4.3	3.7	3.4
New Cars	137.6	129.4	115.5	140.9	141.1	133.0
New Trucks	121.1	147.5	144.6	143.1	163.1	171.0

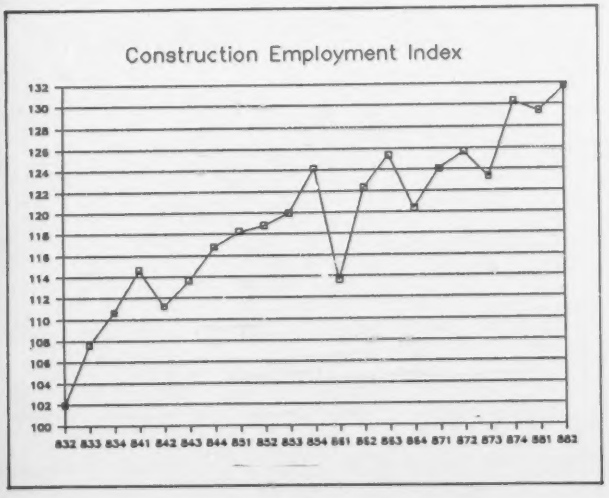
SOUTH DAKOTA BUSINESS & ECONOMIC INDICES

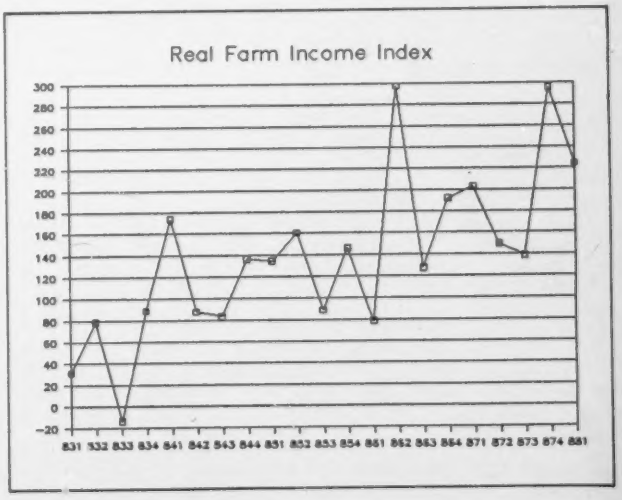
Quarterly Data 1983-1988

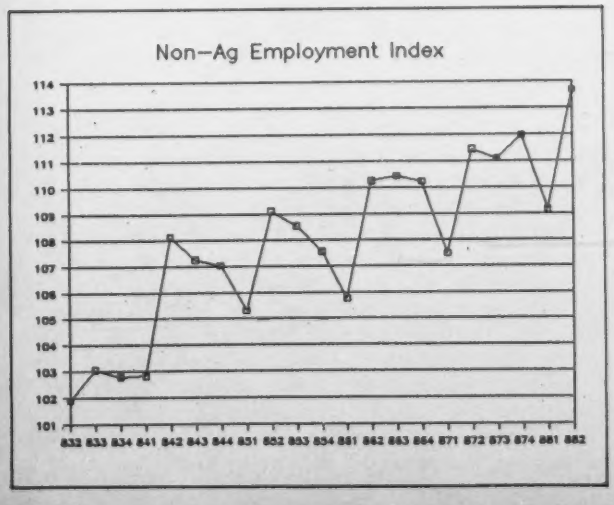
Adjusted for Seasonal Variation

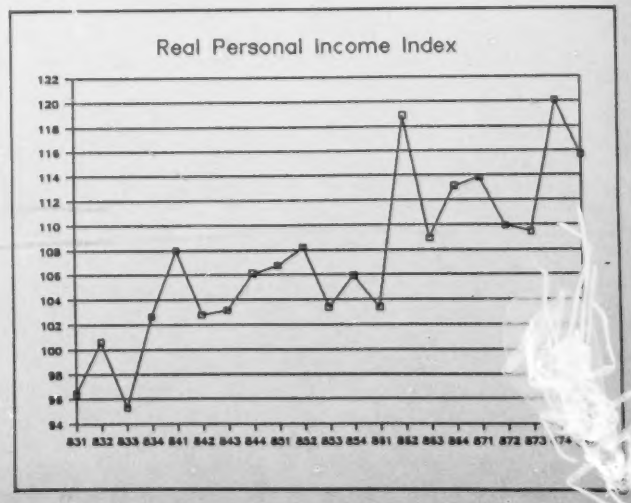












Continued from page 1.

value would be defined as the 1984 value adjusted by inflation using the Consumer Price Index, but not more than two percent per year. Property not already assessed to 1984 levels may be reassessed. Taxes levied for retirement of debt incurred before DPII becomes effective are not subject to the limitation. New taxes would require a two-thirds vote of the Legislature.

The authors examined and quantified the likely impact of the passage of DPII on the ability of local governments to raise revenue through the property tax in South Dakota. These impacts were estimated for counties, cities and towns, school districts, townships, and special entities. Also, the impacts were estimated by property classes such as agricultural and nonagricultural, commercial and residential, and utilities.

Certain ambiguities in the proposed amendment complicated estimating the revenue impact of DPII. One ambiguity relates to the meaning of full and true value. The proposed amendment states that the full and true value "shall be its value as shown on the 1984 tax statement." However, the full and true value is not shown on most tax statements, but rather on the tax assessment notice. Another problem arises because the full and true value used by assessors often does not correspond to the legal definition of full and true, "the usual cash selling price." (SDCL 10-6-1) Generally property is underassessed. Because of this discrepancy, it is not clear which full and true value should be used: the assessed value used for levying the property tax in 1984 or the market value? Subsection (c) of the proposed amendment provides that property *may* be reassessed to 1984 levels. Does this mean that the appropriate full and true value is the assessed value adjusted for underassessment (i.e., the market value)?

The estimates of the impacts of DPII on property tax revenues were based on two alternative assumptions regarding reassessment. Alternative 1 assumes that there will be no reassessment and the full and true values will be based on the assessed values actually used in 1984. Alternative 2 assumes that property will be reassessed to market value. Under this alternative, the assessment-to-sales ratios computed by the South Dakota Department of Revenue were used to adjust assessed values to market values.

Another ambiguity involves use of the Consumer Price Index for adjusting full and true values for inflation up to a maximum of two percent per year. The U.S. Department of Labor publishes two Consumer Price Indexes, the all urban consumer index and the wage and clerical worker index. DPII does not indicate which index is to be used. For this study, the all urban consumer price index was used.

Another ambiguity relates to how the taxes will be apportioned to the various taxing entities. One suggested approach is that any reductions be in equal proportions among the taxing entities. If, for example, the tax entities asked for 50 percent more than the tax limits allow then each entity would have to reduce its request by one-third. One problem with this approach is that it gives each taxing entity an incentive to inflate its budget request. Another suggestion is to allocate the taxes according to the proportions each entity received during some earlier period. These proportions could be either statewide averages or calculated for each county according to its own history. It has been suggested that the allocation should be consistent with the current mill levy system. This would mean that the tax shares would be kept within the statutory mill levy limits set for each taxing entity. Each of these approaches has been criticized due to its insensitivities to changes over time or different circumstances within each county. Because of these ambiguities, it is not possible to determine the impact of the tax limitation proposal on each taxing entity without making some assumptions about the allocation formula. The allocation approaches used in this study include: (1) equal proportionate reduction; (2) historical average proportions for each county; (3) proportions based on maximum mill levies; and, (4) the historical statewide average proportions. Each approach has its own problems. A more fundamental question is whether the current approach with each taxing entity setting its own mill levy (within statutory limits) would even be viable under DPII.

Table A contains statewide revenue impacts of DPII by taxing entity assuming no adjustment for underassessment. The equal proportionate reduction allocation formula was used in the calculations presented in this summary. As this table shows, the statewide reduction in property taxes would be approximately $112 million or 30 percent. The school districts suffer the largest revenue loss at $72 million or 64 percent of the total shortfall. Counties would lose $24 million, cities and towns would lose $14 million, and townships and other entities would lose $3 million.

TABLE A: STATEWIDE IMPACT OF DPII BY TAXING ENTITY NO ADJUSTMENT FOR UNDERASSESSMENT

Taxing Entity	1988 Taxes	Tax Change	% Change*
County Purposes	$ 81.0 mil.	-23.9 mil.	-29.5%
Towns and Cities	46.8	-14.1	-30.0
School Districts	242.3	-71.7	-29.6
Townships	7.1	-2.2	-30.5
Other Entities	1.7	-0.5	-30.1
State	$379.0 mil	-$112.3 mil.	-29.6%

*The percentage deficits differ by entity due to different weightings of agricultural and nonagricultural property by entity.

Table B (following page) presents the impact of DPII on each county and taxing entity. Most counties would suffer tax revenue reduction under this DPII simulation; five counties, Corson, Grant, Harding, McPherson, and Yankton, would not be directly affected by DPII. The largest dollar reduction would take place in Minnehaha and Pennington counties with property tax reductions of $23.9 and $17.4 million, respectively. Brown and Brookings counties would also suffer shortfalls of approximately $5 to $6 million each. In percentage terms, the largest shortfall would occur in Bennett county at 62.4 percent. Generally, the counties with the greatest degree of underassessment suffer the greatest percentage reduction in revenues under this alternative.

The statewide impact of DPII where full and true values are adjusted for underassessment is shown in Table C. It shows that the statewide reduction in property taxes under this alternative would be approximately $18.0 million or 4.8 percent. The large change in the effect of DPII as compared to the first alternative indicates the importance of underassessment. Under this alternative, school districts suffer the largest revenue loss at $10.9 million or 61 percent of the total deficit. Counties would lose $4.6 million, cities and towns would lose $2 million, and townships and other entities would lose $0.5 million.

TABLE B: IMPACT OF DPII BY COUNTY AND TAX ENTITY (NO ADJUSTMENT FOR UNDERASSESSMENT)

COUNTY	1988 TAXES PAYABLE (1)	% CHANGE TAXES (2)	DOLLAR CHANGE IN TAX REVENUES (SURPLUS OR SHORTFALL) COUNTY TOTAL (3)	COUNTY PURP. (4)	CITIES (5)	SCHOOLS (6)	TOWNSHIPS (7)	SPEC. DIST. (8)
AURORA	1,953,961	-28.4%	(554,498)	(193,892)	(36,687)	(300,885)	(23,034)	0
BEADLE	9,626,175	-27.9%	(2,687,288)	(444,152)	(432,453)	(1,724,175)	(62,692)	(23,816)
BENNETT	1,467,728	-62.4%	(916,502)	(389,231)	(34,342)	(492,929)	0	0
BON HOMME	3,676,338	-44.2%	(1,625,155)	(496,948)	(171,190)	(940,807)	0	(16,210)
BROOKINGS	12,367,886	-38.4%	(4,752,980)	(692,167)	(464,097)	(3,473,739)	(108,885)	(14,092)
BROWN	20,697,723	-28.5%	(5,896,971)	(1,062,097)	(1,021,630)	(3,643,483)	(124,451)	(43,310)
BRULE	2,872,955	-20.1%	(577,722)	(167,790)	(70,801)	(330,821)	(5,683)	(2,626)
BUFFALO	520,671	-36.5%	(190,084)	(63,422)	0	(124,877)	(731)	(1,054)
BUTTE	4,409,990	-32.3%	(1,425,623)	(327,940)	(1[illegible],144)	(906,583)	(955)	0
CAMPBELL	1,360,060	-37.2%	(505,831)	(136,470)	(32,633)	(313,537)	0	(3,191)
CHARLES MIX	3,902,179	-37.0%	(1,441,821)	(503,156)	(142,320)	(712,063)	(78,050)	(6,233)
CLARK	3,206,668	-15.3%	(489,275)	(130,682)	(50,935)	(283,472)	(21,636)	(2,551)
CLAY	6,139,337	-23.9%	(1,469,966)	(272,693)	(103,573)	(1,030,680)	(54,398)	(8,622)
CODINGTON	10,024,237	-11.5%	(1,155,210)	(209,907)	(141,964)	(786,882)	(12,360)	(4,096)
CORSON	1,698,180	2.2%	37,335	14,615	1,833	20,206	681	0
CUSTER	3,688,917	-24.0%	(886,804)	(237,901)	(62,649)	(585,542)	0	(712)
DAVISON	8,739,981	-21.3%	(1,864,013)	(359,653)	(366,301)	(1,126,718)	(7,788)	(3,553)
DAY	4,496,954	-32.1%	(1,443,746)	(370,854)	(144,451)	(861,313)	(59,759)	(7,369)
DEUEL	3,194,478	-23.0%	(734,895)	(188,112)	(71,883)	(429,159)	(38,226)	(7,476)
DEWEY	939,602	-12.3%	(115,784)	(43,524)	(8,186)	(64,074)	0	0
DOUGLAS	2,446,359	-44.7%	(1,092,468)	(380,039)	(108,939)	(549,912)	(44,893)	(8,685)
EDMUNDS	3,316,912	-28.8%	(956,442)	(251,099)	(68,678)	(579,994)	(46,773)	(9,897)
FALL RIVER	4,391,221	-48.3%	(2,118,545)	(629,206)	(296,962)	(1,184,217)	(5,411)	(2,750)
FAULK	2,065,319	-28.6%	(591,580)	(194,377)	(35,554)	(344,339)	(10,264)	(7,045)
GRANT	6,746,431	4.1%	273,882	51,118	27,387	187,523	7,475	380
GREGORY	2,777,766	-38.4%	(1,066,344)	(380,612)	(115,469)	(537,716)	(28,004)	(4,543)
HAAKON	1,932,727	-47.0%	(908,348)	(260,946)	(70,614)	(566,111)	0	(10,677)
HAMLIN	2,817,111	-19.5%	(550,084)	(139,725)	(51,120)	(340,437)	(17,754)	(1,050)
HAND	2,952,205	-16.8%	(495,251)	(115,339)	(30,902)	(319,126)	(24,647)	(5,237)
HANSON	1,890,668	-30.6%	(579,351)	(147,141)	(42,890)	(356,752)	(30,516)	(2,052)
HARDING	1,055,157	34.2%	360,748	163,402	15,021	182,326	0	0
HUGHES	7,995,343	-8.5%	(675,530)	(100,287)	(73,372)	(493,630)	0	(8,241)
HUTCHINSON	5,557,986	-40.3%	(2,240,217)	(574,055)	(291,096)	(1,261,134)	(89,623)	(24,311)
HYDE	1,411,293	-32.6%	(460,688)	(177,701)	(43,252)	(234,979)	(329)	(4,427)
JACKSON	935,437	-9.7%	(90,642)	(27,610)	(10,583)	(51,678)	(270)	(501)
JERAULD	1,566,964	-36.0%	(563,325)	(175,500)	(42,778)	(330,514)	(12,842)	(1,691)
JONES	1,419,111	-41.5%	(588,418)	(187,480)	(29,856)	(349,564)	(15,112)	(6,407)
KINGSBURY	3,880,639	-39.3%	(1,523,766)	(353,578)	(165,828)	(906,642)	(95,118)	(2,601)
LAKE	5,858,022	-34.8%	(2,036,895)	(418,576)	(204,032)	(1,320,716)	(91,320)	(2,251)
LAWRENCE	11,361,930	-22.9%	(2,603,006)	(474,605)	(388,414)	(1,738,499)	(1,488)	0
LINCOLN	8,558,190	-33.6%	(2,875,735)	(480,775)	(313,666)	(1,952,303)	(128,697)	(294)
LYMAN	2,501,389	-33.7%	(841,663)	(272,399)	(49,587)	(488,591)	(24,436)	(6,650)
MARSHALL	3,041,284	-27.7%	(841,776)	(230,303)	(54,217)	(508,276)	(46,634)	(2,346)
MCCOOK	3,539,444	-32.6%	(1,152,614)	(307,666)	(88,908)	(681,074)	(74,965)	0
MCPHERSON	2,805,392	2.7%	76,693	25,410	6,520	43,604	497	663
MEADE	8,563,335	-34.2%	(2,931,209)	(889,047)	(241,063)	(1,785,549)	(3,675)	(11,875)
MELLETTE	854,946	-24.3%	(207,399)	(81,064)	(4,329)	(116,711)	(5,295)	0
MINER	2,129,023	-36.2%	(771,085)	(300,705)	(52,493)	(360,410)	(56,811)	(666)
MINNEHAHA	68,095,849	-35.2%	(23,934,985)	(2,296,514)	(4,543,110)	(16,971,940)	(92,720)	(30,702)
MOODY	3,805,650	-42.7%	(1,623,001)	(359,341)	(124,939)	(1,007,542)	(127,993)	(3,186)
PENNINGTON	47,893,254	-36.3%	(17,368,342)	(4,062,406)	(1,825,965)	(11,309,229)	(1,897)	(168,845)
PERKINS	3,009,527	-6.1%	(182,247)	(45,462)	(21,715)	(110,287)	(4,782)	0
POTTER	2,215,486	-22.5%	(498,186)	(145,207)	(58,884)	(290,822)	0	(3,274)
ROBERTS	4,218,665	-32.7%	(1,380,468)	(387,356)	(115,301)	(798,298)	(76,883)	(2,631)
SANBORN	1,650,152	-50.5%	(832,881)	(277,062)	(48,526)	(440,250)	(56,772)	(10,271)
SHANNON	353,391	-38.0%	(134,275)	(53,371)	(760)	(80,144)	0	0
SPINK	5,623,406	-31.9%	(1,793,828)	(491,812)	(163,407)	(1,040,045)	(83,622)	(14,943)
STANLEY	1,952,499	-19.3%	(376,916)	(104,769)	(43,266)	(228,881)	0	0
SULLY	1,939,147	-9.1%	(176,433)	(71,843)	(5,848)	(97,042)	0	(1,699)
TODD	836,953	-25.8%	(215,874)	(92,983)	(8,364)	(114,526)	0	0
TRIPP	4,457,126	-24.5%	(1,093,123)	(367,169)	(119,841)	(575,013)	(31,100)	0
TURNER	5,006,621	-41.5%	(2,076,152)	(526,467)	(172,288)	(1,250,999)	(126,398)	0
UNION	6,059,076	-27.6%	(1,671,644)	(392,959)	(155,796)	(1,022,282)	(100,608)	0
WALWORTH	3,689,207	-30.1%	(1,110,219)	(254,590)	(201,774)	(648,289)	0	(5,566)
YANKTON	7,964,830	1.0%	79,714	16,691	8,760	53,251	785	226
ZIEBACH	868,906	-37.8%	(328,587)	(127,532)	(8,573)	(192,483)	0	0
STATE	378,995,349	-29.6%	(112,291,710)	(23,897,269)	(14,059,198)	(71,668,685)	(2,156,300)	(510,225)

TABLE C: STATEWIDE IMPACT OF DPII BY TAXING ENTITY ADJUSTMENT FOR UNDERASSESSMENT

Taxing Entity	1988 Taxes	Tax Change	% Change*
County Purposes	$ 81.0 mil.	-$ 4.6 mil.	-5.7%
Towns and Cities	46.8	-2.0	-4.2
School Districts	242.3	-10.9	-4.5
Townships	7.1	-0.4	-5.4
Other Entities	1.7	-0.1	-7.2
State	$379.0 mil	-$18.0 mil	-4.8%

*The percentage deficits differ by entity due to different weightings of agricultural and nonagricultural property by entity.

Table D presents the impact of DPII by county and by taxing entity within each county. Under this alternative 31 of 66 counties would not suffer a revenue loss. The largest dollar reduction would take place in Pennington county with a property tax reduction of $6.3 million. Brown, Douglas, Fall River, and Lincoln counties would also suffer deficits close to one million dollars. In percentage terms, the largest shortfall would occur in Douglas county at 33 percent.

Table E shows how DPII would change the distribution of the property tax burden among owners of agricultural, nonagricultural, and utility properties. Under current law, taxes on agricultural property account for 30 percent of all property taxes statewide. DPII would drop that share to

Continued on page 6.

TABLE D: IMPACT OF DPII BY COUNTY AND TAXING ENTITY (ADJUSTED FOR UNDERASSESSMENT)

COUNTY	1988 TAXES PAYABLE (1)	% CHANGE TAXES (2)	DOLLAR CHANGE IN TAX REVENUES (SURPLUS OR SHORTFALL) COUNTY TOTAL (3)	COUNTY PURP. (4)	CITIES (5)	SCHOOLS (6)	TOWNSHIPS (7)	SPEC. DIST. (8)
AURORA	1,953,961	-14.6%	(284,984)	(99,651)	(18,855)	(154,640)	(11,838)	0
BEADLE	9,626,175	-2.4%	(229,325)	(37,903)	(36,904)	(147,136)	(5,350)	(2,032)
BENNETT	1,467,728	-5.8%	(84,765)	(35,999)	(3,176)	(45,590)	0	0
BON HOMME	3,676,338	2.6%	96,166	29,406	10,130	55,669	0	959
BROOKINGS	12,367,886	1.9%	240,147	34,972	23,449	175,513	5,501	712
BROWN	20,697,723	-4.2%	(871,201)	(156,964)	(150,984)	(538,460)	(18,392)	(6,401)
BRULE	2,872,955	-3.6%	(102,014)	(29,628)	(12,502)	(58,416)	(1,003)	(464)
BUFFALO	520,671	-16.6%	(86,565)	(28,883)	0	(56,869)	(333)	(480)
BUTTE	4,409,990	0.7%	32,403	7,454	4,722	20,606	22	0
CAMPBELL	1,360,060	-9.0%	(122,531)	(33,058)	(12,750)	(75,950)	0	(773)
CHARLES MIX	3,902,179	4.2%	162,166	56,591	16,007	80,087	8,778	701
CLARK	3,206,648	16.0%	513,167	137,064	53,422	297,314	22,692	2,675
CLAY	6,139,337	0.6%	35,276	6,544	2,486	24,734	1,305	207
CODINGTON	10,024,237	24.1%	2,412,667	438,394	296,492	1,643,410	25,815	8,556
CORSON	1,698,180	15.6%	265,588	103,969	13,038	143,740	4,841	0
CUSTER	3,688,917	5.0%	183,718	49,286	12,979	121,306	0	148
DAVISON	8,739,981	-8.4%	(735,101)	(141,835)	(144,456)	(444,338)	(3,071)	(1,401)
DAY	4,496,954	-10.6%	(476,227)	(122,328)	(47,648)	(284,109)	(19,712)	(2,431)
DEUEL	3,194,478	9.8%	313,785	80,320	30,692	183,242	16,339	3,192
DEWEY	939,602	39.4%	370,375	139,225	26,187	204,963	0	0
DOUGLAS	2,446,359	-33.0%	(806,405)	(280,526)	(80,413)	(405,917)	(33,138)	(6,411)
EDMUNDS	3,316,912	-8.4%	(276,811)	(72,673)	(19,877)	(167,860)	(13,537)	(2,864)
FALL RIVER	4,391,221	-20.5%	(898,603)	(266,884)	(125,959)	(502,298)	(2,295)	(1,167)
FAULK	2,065,319	-16.9%	(348,655)	(114,558)	(20,954)	(202,940)	(6,049)	(4,152)
GRANT	6,746,431	36.0%	2,430,968	453,719	243,084	1,664,444	66,351	3,370
GREGORY	2,777,766	-13.9%	(386,991)	(138,129)	(41,905)	(195,144)	(10,163)	(1,649)
HAAKON	1,932,727	-17.2%	(332,823)	(95,612)	(25,873)	(207,426)	0	(3,912)
HAMLIN	2,817,111	12.7%	358,467	91,053	33,313	221,848	11,569	684
HAND	2,952,205	22.7%	668,900	155,780	41,737	431,020	33,289	7,073
HANSON	1,890,668	-9.0%	(169,717)	(43,104)	(12,564)	(104,508)	(8,940)	(601)
HARDING	1,055,157	73.8%	778,640	352,686	32,422	393,532	0	0
HUGHES	7,995,343	8.2%	655,959	97,382	71,246	479,329	0	8,002
HUTCHINSON	5,557,986	-12.4%	(686,816)	(175,996)	(89,245)	(386,644)	(27,477)	(7,453)
HYDE	1,411,293	-8.0%	(113,240)	(43,680)	(10,632)	(57,759)	(81)	(1,088)
JACKSON	935,437	16.0%	149,750	45,615	17,484	85,377	446	828
JERAULD	1,566,964	-24.5%	(383,803)	(119,571)	(29,145)	(225,185)	(8,750)	(1,152)
JONES	1,419,111	-5.1%	(72,185)	(22,999)	(3,663)	(42,883)	(1,854)	(786)
KINGSBURY	3,880,639	-14.1%	(547,943)	(127,146)	(59,631)	(326,027)	(34,204)	(935)
LAKE	5,858,022	1.4%	81,137	16,674	8,127	52,609	3,638	90
LAWRENCE	11,361,930	10.8%	1,228,368	223,968	183,296	820,404	702	0
LINCOLN	8,558,190	-9.5%	(810,576)	(135,515)	(88,412)	(550,291)	(36,275)	(83)
LYMAN	2,501,389	-2.2%	(54,714)	(17,708)	(3,223)	(31,762)	(1,589)	(432)
MARSHALL	3,041,284	-2.8%	(85,661)	(23,436)	(5,517)	(51,723)	(4,746)	(239)
MCCOOK	3,539,444	-8.2%	(291,694)	(77,862)	(22,500)	(172,361)	(18,972)	0
MCPHERSON	2,805,392	10.9%	305,877	101,342	26,004	173,907	1,982	2,642
MEADE	8,563,335	0.1%	9,204	2,792	757	5,607	12	37
MELLETTE	854,946	-5.2%	(43,987)	(17,193)	(918)	(24,753)	(1,123)	0
MINER	2,129,023	-17.3%	(368,011)	(143,516)	(25,053)	(172,010)	(27,114)	(318)
MINNEHAHA	68,095,849	5.1%	3,487,832	334,651	662,027	2,473,170	13,511	4,474
MOODY	3,805,650	-8.5%	(322,336)	(71,367)	(24,814)	(200,102)	(25,420)	(633)
PENNINGTON	47,893,254	-13.1%	(6,273,605)	(1,467,378)	(659,556)	(4,084,998)	(685)	(60,988)
PERKINS	3,009,527	6.4%	192,080	47,915	22,887	116,238	5,040	0
POTTER	2,215,486	2.9%	63,499	18,508	7,505	37,068	0	417
ROBERTS	4,218,665	11.2%	470,804	132,106	39,323	272,257	26,221	897
SANBORN	1,650,152	-25.1%	(414,087)	(137,748)	(24,126)	(218,881)	(28,226)	(5,106)
SHANNON	353,391	-13.3%	(47,060)	(18,705)	(266)	(28,088)	0	0
SPINK	5,623,406	-8.9%	(501,614)	(137,527)	(45,694)	(290,831)	(23,383)	(4,179)
STANLEY	1,952,499	4.6%	89,188	24,791	10,238	54,159	0	0
SULLY	1,939,147	13.0%	252,944	102,998	8,384	139,126	0	2,436
TODD	836,953	55.5%	464,272	199,976	17,988	246,308	0	0
TRIPP	4,457,126	11.8%	526,808	176,949	57,755	277,116	14,988	0
TURNER	5,006,621	-2.5%	(122,921)	(31,170)	(10,200)	(74,067)	(7,484)	0
UNION	6,059,076	3.6%	216,772	51,418	20,147	132,198	13,010	0
WALWORTH	3,689,207	-15.3%	(563,301)	(129,174)	(102,376)	(328,928)	0	(2,824)
YANKTON	7,964,830	18.2%	1,448,041	303,198	159,130	967,334	14,269	4,110
ZIEBACH	868,906	-10.2%	(88,849)	(34,484)	(2,318)	(52,047)	0	0
STATE	378,995,349	-4.8%	(18,005,121)	(4,629,910)	(1,962,109)	(10,910,941)	(381,204)	(120,954)

about 26 percent, without reassessment, and 29 percent with reassessment. The share borne by owners of nonagricultural property would rise from 63 percent under current law to about 65 percent under DPII if property is not reassessed and 64 percent if it is. Owners of utility property would see their share of the total property tax burden rise from seven percent to about nine percent without reassessment and eight percent with reassessment.

TABLE E. STATEWIDE IMPACT OF DPII BY PROPERTY TYPE

(Percent of property tax levied on each property type)

	1988 Taxes	Without Reassessment	With Reassessment
Agricultural	30%	26%	29%
Nonagricultural	63%	65%	64%
Utility	7%	9%	7%

Overall, this study shows a wide range in the impact of DPII. Under the first alternative, where reassessment is not assumed, most counties would lose property tax revenue. Statewide the revenue loss would be approximately $112 million. The major losers, assuming equal proportionate reduction, would be the school districts with a loss of $72 million. If reassessment is allowed the property tax revenue loss would be smaller in the short-run with a loss of approximately $18 million. Once again the major loser would be the schools at $11 million. If other apportionment approaches are used the results by taxing entity could vary widely.

Over the long-run, there are several concerns about the impact of the proposed amendment. First, full and true values are linked to the 1984 values adjusted for general inflation as measured by the Consumer Price Index. This means that in relative terms, the valuations of property will

be locked-in to the 1984 levels. This inflexibility could affect equity and economic efficiency as market valuations vary over time. Second, the two percent limitation to the rate of increase in full and true values could be a major limitation, particularly if general inflation remains above this level. If inflation remains above two percent, and the cost of government services rises at the general inflation rate, DPII would force a lessening reliance on the property tax, if not immediately, then certainly in the future.

Taxes, Spending and Dakota Proposition II Continued from page 1.

People on both sides of the debate claim that property taxes have risen dramatically, especially in the past few years. A June 1987 letter to the Sioux Falls *Argus-Leader* provides an example, stating that proponents of Dakota Proposition predicted in 1980 that "1. Property Taxes would double in four to five years; 2. The legislature will do nothing but mandate more spending; and 3. The school budgets will go out of the realm of reality."[1] The letter does not indicate whether the predictions came true, but they provide a good starting point for examining whether—and how—conditions have changed since the 1980 defeat of the first Dakota Proposition.

Changes since the first Dakota Proposition

As Table 1 shows, property taxes in South Dakota rose by 47 percent in the seven years between 1980 and 1987. At the same time, consumer prices rose 37 percent, and the prices of goods and services bought by state and local governments rose 45 percent. (Table 2.) Between 1980 and 1987, the purchasing power given up by property taxpayers—their property taxes adjusted for the prices they paid—rose by about 7.5 percent, but the purchasing power received by South Dakota state and local governments—property taxes they received adjusted for the prices they paid—rose by less than 2 percent. The difference occurred because state and local governments' prices rose more rapidly than did consumer prices. (All price data reported here are national averages, because price indices are not calculated for South Dakota.) During the same 1980 - 1987 period, South Dakota personal income rose by 56 percent,[2] so property taxes as a proportion of personal income fell almost six percent.

Table 1: SOUTH DAKOTA PROPERTY TAXES BY LOCAL ENTITY

(Millions of dollars)

	1980		1987		Percent change, 1980-87
	Taxes	Percent	Taxes	Percent	
Counties	49.491	20.1%	76.691	21.1%	55.0%
Cities and towns	36.213	14.7%	47.361	13.0%	30.8%
Schools	153.407	62.2%	227.18	62.5%	48.1%
Townships	5.168	2.1%	7.037	1.9%	36.2%
Other districts	2.325	0.9%	4.94	1.4%	112.5%
TOTAL	246.603	100.0%	363.209	100.0%	47.3%

Source: S.D. Department of Revenue, *Annual Report, FY 1980* and *FY 1987*.

These figures show that property taxes did not double in four, five, or seven years. What did happen to the property tax burden since 1980 depends on which tax burden measure we choose. Unadjusted for inflation, property taxes rose by less than 50 percent. In terms of taxpayers' purchasing power, property taxes rose somewhat. In terms of governments' purchasing power, they rose only slightly. Compared to personal income, they fell.

Of course, this says nothing about the distribution of the property tax burden—which segments of the population are paying it. A particular group's tax burden changes either because group members pay more or less taxes or because their ability to pay changes. Property taxes change when rates or assessed values change. Tax paying ability usually depends on income. Since property values and incomes associated with them don't always move together, different people experience different changes in tax burdens.

Table 2: PRICE INDEXES AND INFLATION
(1982 = 100)

	1980	1987	Percent change, 1980-87
Personal consumption expenditures	86.6	118.8	37.2%
State and local government purchases	86.2	124.7	44.7%
Elementary and secondary school spending	81.2	133.9	64.9%

Sources: Personal consumption and state and local: Dept. of Commerce, Bureau of Economic Analysis; Elementary and secondary: Research Associates of Washington, *School Price Index: 1987 Update* (1988)

While we have very little data on how much property tax is paid by owners of different property types (e.g., residential or commercial), we do know taxes on nonagricultural property and on agricultural land. Between 1980 and 1987, South Dakota nonfarm personal income rose by 50 percent and farm personal income by 129 percent. Data on farm personal income must be viewed with caution, because they are highly variable and subject to significant revisions. Comparing three-year averages might provide more reliable comparisons. The 1985-87 average South Dakota farm personal income was 36 percent above the 1979-81 average.[3] During the same 1980 to 1987 period, taxes on nonagricultural property increased 58 percent while taxes on agricultural land rose 25 percent.[4] Thus, it would appear that property taxes relative to personal income rose for nonfarm property and fell for farmland. This does not mean that land values rose since 1980. Tax rates may have risen or assessed values may have not yet been adjusted downward in accord with falling land values.

Table 1 also shows that school district property taxes rose slightly faster than total property taxes, while county taxes rose much faster. School districts' share also rose slightly. The rapid growth in "Other," which includes conservancy subdistricts and special entities such as fire and sewer districts, affected the overall growth rate very little because it accounts for less than two percent of total property taxes.

Table 3 shows the change in South Dakota school districts' receipts from local, state, and federal sources between 1979-80 and 1986-87. State sources grew most rapidly. Personal property tax replacement, which was being phased in during the 1979-80 school year, nearly doubled. State aid rose over 62 percent. Aid for exceptional children accounted for most of the increase in other state sources.

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Table 3: SOUTH DAKOTA SCHOOL DISTRICT REVENUES

	(Millions of dollars) 1979-80		1986-87		Percent change, 1980-87
	Revenue	Percent	Revenue	Percent	
Local sources	171.056	34.7%	254.800	33.0%	49.0%
Property tax	150.096	30.4%	220.611	28.5%	47.0%
Other	20.960	4.2%	34.189	4.4%	63.1%
State sources	61.569	12.5%	113.082	14.6%	83.7%
State aid	37.407	7.6%	60.659	7.8%	62.2%
Pers. prop. repl.	12.840	2.6%	24.848	3.2%	93.5%
Other	11.322	2.3%	27.575	3.6%	143.6%
Federal aid	28.068	5.7%	37.330	4.8%	33.0%
TOTAL	493.318	100.0%	773.094	100.0%	56.7%

Source: S.D. Department of Education and Cultural Affairs, *Educational Statistics Digest*, 1979-80 and 1986-87.

Federal aid to South Dakota elementary and secondary schools fell by more than $2.5 million between 1984-85 and 1986-87. This probably helps explain why state and local receipts accelerated during those years.[5] If Federal aid continues to fall, state and local governments will be forced to raise their contributions even more, or provide less in educational services.

As Table 2 shows, the price of elementary and secondary education rose even faster than did South Dakota school districts' receipts. The price index used for this calculation is a national average—no such figure is available for South Dakota. We do know that between 1980 and 1987 teachers' salaries rose 67 percent nationally and 54 percent in South Dakota.[6] Since salaries and wages account for over three-fourths of total spending for elementary and secondary education (teachers' salaries account for over half), educational costs may have risen more slowly in South Dakota than nationally. Even with this difference, it seems likely that costs rose about as rapidly as spending. While school districts spent more dollars, they provided about the same level of actual goods and services.

Comparisons to other states

To understand levels of taxes and government spending in South Dakota and their relevance to Dakota Proposition II, it is also helpful to compare South Dakota to other states. This is best done with per capita data, as in Table 4. Between 1979-80 and 1985-86, the last year for which national data are available, state and local taxes rose more slowly in South Dakota than elsewhere. Thus, per capita taxes, which were 80 percent of the national average in 1980, fell even further to 74 percent of the national figure by 1986. South Dakota's property taxes also grew more slowly. Per capita property taxes were 116 percent of the national average in 1980, but by 1986 they had fallen to 103 percent of the national average.

Not surprisingly, per capita state and local spending grew more slowly in South Dakota than in the nation as a whole. It also grew more slowly than did the price deflator for state and local government purchases. (Table 2.) Per capita spending for elementary and secondary education also grew less rapidly in South Dakota.

Even though South Dakota's per capita personal income is well below the nation's, the state's taxes as a percent of personal income were below the national average in 1980 and 1986. However, this figure did rise slightly between the two years. Property taxes relative to personal income were about 29 percent above the national average in both years.[7]

Table 4: PER CAPITA REVENUES AND EXPENDITURES

	United States			South Dakota		
	1979-80	1985-86	Percent change	1979-80	1985-86	Percent change
Revenues						
Total general	1,687.9	2,660.6	57.6%	1,603.9	2,329.8	45.3%
Total taxes	986.6	1,547.4	56.8%	788.6	1,141.5	44.8%
Property taxes	302.4	463.4	53.2%	350.7	477.3	36.1%
Federal aid	366.6	469.1	28.0%	457.7	579.4	26.6%
Expenditures						
Total general	1,621.8	2,516.0	55.1%	1,586.4	2,253.7	42.1%
Local schools	410.3	640.0	56.0%	391.9	598.4	52.7%

Source: U.S. Department of Commerce, Bureau of the Census, *Government Finances in 1979-80* and *1985-86*.

Summary

Taxes levied by South Dakota state and local governments rose in dollars, but the actual services provided (i.e., after adment for consumer prices. After adjustment for the price of goods and services that state and local governments buy, taxes rose slightly. Thus, South Dakota governments provided about the same level of goods and services in 1986 as in 1980. Elementary and secondary education spending also rose in dollars, but the actual services provided (i.e., after adjustment for inflation) rose little, if at all. State aid to local schools rose much more rapidly than did school property taxes.

Overall, South Dakota's tax burden (measured relative to population or to personal income) fell in comparison to the rest of the nation. Per capita taxes were far below the national average in 1980 and fell even further after that.

None of this in itself is an argument for or against property tax limits. Property taxes are high in South Dakota compared to most other states. However, considering that other taxes are relatively low—or nonexistent—the overall tax burden is one of the lowest in the nation. Adjusted for inflation, South Dakota's tax situation has not changed much since 1980. Compared to the rest of the nation, South Dakota taxes are falling. If two-thirds of South Dakota voters rejected the Dakota Proposition in 1980, will a majority now vote for limits?

ENDNOTES

[1]Sioux Falls *Argus-Leader*.

[2]U.S. Department of Commerce, Bureau of Economic Analysis.

[3]Ibid.

[4]S.D. Department of Revenue, *Annual Report*, FY 1980 and FY 1987.

[5]S.D. Department of Education and Cultural Affairs, *Educational Statistics Digest*, 1984-85 and 1986-87.

[6]*Statistical Abstract of the United States*, 1980 and 1988.

[7]U.S. Department of Commerce, Bureau of the Census, *Government Finances in 1979-80* and *1985-86*. For more detail, especially comparing South Dakota to adjoining states, see Raymond J. Ring, "South Dakota's Tax Burden: An Update," *South Dakota Business Review*, Vol. 46, No. 3, March 1988.

ERRATA

Paragraph one of the **Summary** on page 8 should read as follows.

Summary

Taxes levied by South Dakota state and local governments rose in dollar terms since 1980. They even rose after adjustment for consumer prices. After adjustment for the price of goods and services that state and local governments buy, taxes rose slightly. Thus, South Dakota governments provided about the same level of goods and services in 1986 as in 1980. Elementary and secondary education spending also rose in dollars, but the actual services provided (i.e., after adjustment for inflation) rose little, if at all. State aid to local schools rose much more rapidly than did school property taxes.

A MARKET RESEARCH PRIMER, PART I

By Steven W. Pharr

ABSTRACT

This article, at the risk of being elementary, presents a number of important considerations for both the purchaser and supplier of market research. The use of market research by small firms has increased dramatically in the recent past. In many cases both parties have been dissatisfied with the outcome of the arrangement. The proper role of market research is presented along with a description of the basic process that it should follow. Characteristics of good market research are highlighted as well as the role that each party should play in the research agreement.

INTRODUCTION

The role of market research has expanded considerably over the past ten to fifteen years. While many large firms have established their own in-house research departments, a substantial portion of this growth can be attributed to the purchase of custom research by small to medium-sized firms. This appears to be a "which came first" phenomena. Did these firms recognize the need for more detailed and problem specific information, thereby increasing demand, or did the increased availability and lower cost, due to an increase in the number of suppliers, entice them into taking the plunge? Whatever the case may be, the result is still the same: more and more firms are purchasing research from independent suppliers.

These buyer/supplier arrangements are not all without problems. There have been a number of unhappy parties on both sides of the contract. Many purchasers come away from these arrangements feeling that they have not had their questions fully answered or that the results were inaccurate. Others feel they have been overcharged or have no idea of how to implement the research findings after the project was completed. Many research suppliers feel that their results have been misinterpreted or under-utilized. Others believe that they had inadequate access to their client's information sources or that they were limited due to the financial constraints of the purchaser. The purpose of this article is to highlight a number of ways to decrease the probability of experiencing these unnecessary results.

Both parties can take steps to increase the probability that the agreement will be mutually beneficial. The purchaser should have some understanding of the market research process, their role in this process, and how the results can and should be used. The researcher should delineate, in detail, what the project will involve, its purpose, the nature of the outcome, recommendations for implementation, and the cost. Both parties should be fully aware of, and agree upon, the expectations that they have of each other.

Three major points will be addressed in the article. The first will consider the role of market research in the decision making process of the client firm. Secondly, some basic considerations of market research will be presented. This will include the stages of a market research project and characteristics of "good" research. Lastly, the roles of the purchaser and the supplier in the execution of the research project and the utilization of the results will be discussed.

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THE ROLE OF MARKETING RESEARCH

Market research has been viewed by many firms as a panacea. Some purchasers have expected a solution to all of their problems and a guarantee for success. Some suppliers have expected praise and glory for their talents and an easy road to riches. But, as any one who has planned, organized and operated a business knows, this is the stuff of which fairy tales are made. The goal of marketing research is plain and simple; to obtain reliable information that will decrease the uncertainty surrounding the decision making process.

The manager is, primarily, a decision maker. This process of decision making is plagued with uncertainty, which often times reaches intolerable levels. These gaps in knowledge may center around identifying a problem or opportunity, selecting the most appropriate course of action or evaluating the effectiveness of a previously implemented strategy. When a member of the decision making unit becomes uneasy about the degree of uncertainty being faced, this is the time to explore the possibility of market research. A successful research project will provide relevant information that will decrease the information gap. It should also recommend methodologies to facilitate the use of this information. It will not make a decision for the purchasing firm! That is the role of the manager. He/she is the decision maker!

How Much Information?

Although the costs and benefits of obtaining good information are not known with certainty, they represent an important issue that must be dealt with by the purchaser prior to the contract; how much information do I need and how much can I afford? Some of the missing bits of information, based upon the judgment of the purchaser, may contribute significantly to the development of efficient and effect strategies. Other bits of information may be "nice to know" but far less critical. A hierarchy of desired information should be established prior to the contract. This hierarchy may be altered or stated more specifically as negotiations progress, but the critical point is that the purchaser must evaluate his/her position and assess the information gaps that need to be filled. This provides the firm with an enlightened/informed position for developing the market research agreement. The hierarchy should provide direction and help avoid confusion over the important issues.

How Much Can I Afford?

The purchaser of market research must realize that this information comes at a cost and at some point the cost of securing additional information will exceed the benefits of further reductions in uncertainty. One must also remember that the firm operates on a relatively fixed budget; therefore, if too much is spent on obtaining information very little may be left for adequate implementation of the marketing effort.

Once the hierarchy of important information has been developed the firm must determine the funds available for uncertainty reduction. In smaller firms, these funds are provided through reductions in other costs, postponement of other projects or from reductions in profits. When determining the available funds, it is important to identify the time frame of the decision being made. If the problem is short term, the source of funding should be short term as well. Examples might include selecting one of a number of

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possible advertisements or determining the value of a cents-off coupon offer. The funding of long term projects should consider the use of long term funding sources. Examples might include identification of the firm's target market or the testing of possible new product offerings.

The benefits of the additional information should outweight the costs of acquiring it. Required payback periods of less than one year would be appropriate for most short term projects. Payback periods greater than one year's benefits would be reasonable for long term projects. This cost benefit analysis is no easy matter. While the costs can be determined with certainty prior to the contract, the benefits can only be estimated. This applies to both the purchaser and the supplier. It is, at best, an educated guess! The information acquired may or may not facilitate decision making as anticipated. This is a risk with which the purchaser must feel comfortable.

Although the benefits of the information obtained may be uncertain, the information itself should not be in question. This information is the product of the market research effort. For example, assume you feel that a better profile of your customer would enable you to market your product much more efficiently, thereby realizing as much as $80,000.00 in benefits over a five-year period. Let us further assume that you have contracted with XYZ Market Research, Inc. to develop a detailed profile of your customer base for $40,000.00. A successful research project should result in an accurate customer profile including all of the characteristics specified in the contract. There should be very little, if any, uncertainty surrounding this outcome. At this point, the contract has been fulfilled. The only appreciable degree of uncertainty involved in this cost benefit analysis deals with whether or not the $80,000.00 benefit is actually realized once the customer profile has been obtained.

CHARACTERISTICS OF MARKET RESEARCH

Although market research is not an exact science, there are a number of common features. One goal of this article is to briefly highlight a number of these features. The most obvious characteristic is a common sequence of stages in the research process. Much less apparent are a number of characteristics of good market research. It is mandatory that the supplier be extremely well versed in these areas. It is also highly desirable for the purchaser to have at least a rudimentary understanding, not only for the sake of a basic appreciation of the task, but for defensive purposes as well.

The Market Research Process

Generally speaking, market research follows a process which is a version of the scientific method. This approach is intended to cause the researcher to consider the problem first, and then develop a plan of attack for solving it in a logical manner. The stages of this process are: 1. Problem Definition, 2. Situation Analysis, 3. Research Design, 4. Collection of Problem Specific Data, 5. Data Analysis, and 6. Recommendations. Not all projects will fit nice and neatly into this six-stage process but a vast majority should. Those that do not might require some justification on the part of the supplier. These stages will now be examined in more detail.

Problem Definition

Recognizing one's problem is often the most difficult stage in the process. It is certainly the most important since a very good answer to the wrong question is of little value to the manager. The purchaser and the supplier must work together at this stage and attempt to identify the problem at hand. The purchaser is the primary participant at this stage since it is his firm that is experiencing the problem, not the researcher. A major pitfall of this stage is confusing symptoms with problems. For example, one may perceive low sales as the problem. It is much more likely, however, that the low sales level is a symptom of a less obvious underlying problem. It may be due to low product quality, a price set too high, inadequate distribution, a lack of promotion, intensive competition or a multitude of other factors. The main point is that problem definition requires a good deal of thought, the involvement of more than one person, and, although it is primarily the responsibility of the purchasing firm, the involvement of both parties to the contract.

Situation Analysis

The situation analysis involves the collection and analysis of data which is readily available. Normally this data has already been collected by someone else, often for some purpose other than the specific problem at hand. In the field of market research this is often referred to as secondary data. Sources of secondary data would include the purchaser's sales and accounting records, trade association publications, federal and state statistics on population, manufacturing, retail and wholesale trade. Data collected at this stage is analyzed in order to develop a more thorough understanding of the problem situation. It is very likely that a misspecification of the problem might be realized and a new problem definition would then be formulated. It is also possible that a solution to the problem be identified at this stage thus ending the market research process early.

The major problem associated with the situation analysis is the multitude of secondary data available. Identifying what is available, what is needed and where it is located can be a major task. The easiest way is to contact your trade associations, a State Data Center, or a good reference librarian at the public library for assistance. Remember, there is no reason to reinvent the wheel. Why collect data that has already been collected and is very often free for the asking?

Research Design

In many cases, although the problem may be well understood at this point, viable solutions will not be apparent. There may still be a great deal of uncertainty surrounding the manner in which the problem might be solved. Identifying a solution would require data that is specific to the problem at hand and which has not been previously collected. This type of data is often referred to as primary data. The third stage of the process is to develop a Research Design. The research design is a "plan of attack" for gathering the primary data required for solving the problem at hand.

There are a number of commonly used methods for collecting primary data. These would include observation, experimentation, surveys, and focus group interviews. All of them have strengths and weaknesses which must be understood in order to make a rational choice of the most appropriate for a particular situation. Each would make an appropriate topic for a quite lengthy book; therefore, only the most basic considerations will be dealt with here.

The observation method attempts to record behavior as seen through the eyes of the researcher. These eyes may be a traffic counter used to observe traffic flow patterns or a checkout counter scanner used to observe purchase behavior. It may be a video camera used for observing customer traffic patterns in a department store or the TV

monitors used by A.C. Nielsen to observe television viewing patterns. The human eye may be included as well. This method can tell us what has happened in regard to behavior but it cannot tell us why it happened. Another drawback is that the cost of mechanical observation devices may be prohibitive, especially for short term projects.

The experimental approach attempts to test reactions to a variety of treatment conditions. These treatment conditions may be different price levels, advertisements, package sizes, or a multitude of other marketing mix variables. The experiment may take place in a "laboratory," such as a mock-up of a grocery store shelf arrangement located at the researcher's facilities. Or it might take place in a natural environment such as the consumer's home or a real grocery store shelf. The goal is to isolate and identify the influence of the treatment condition (the different prices or advertisements) upon the behavior of the subjects (the consumers, retailers, wholesalers) used in the experiment. In essence, we assume a cause and effect relationship between the treatment and the resulting behavior. Laboratory settings enable us to structure and control the experiment and isolate the variable of interest (price, package size, etc.).

The price of this high degree of control is often an artificial environment that, itself, could significantly influence the behavior of the subjects. Real world settings (the consumer's home or the grocery store) greatly decrease the chance of this type of distortion but allow a number of other real world variables to influence the behavior under consideration. For example, are the purchase levels recorded in the experiment due to the different advertisements tested or to the shelf position of the product, prices or advertising of competitors or a multitude of other factors. A well designed experiment will make the tradeoffs which allow for necessary control yet maintain sufficient realism. The execution of a good experimental design can become quite expensive.

The survey methodology is one of the most widely used in market research. They may take the form of a mail survey, a telephone interview, or a personal interview. At the heart of this approach is the questionnaire. In addition to being perhaps the most important element, it is often the most problematic. The questionnaire must be designed, tested and redesigned in order to elicit responses that will answer the purchaser's questions and help reduce uncertainty in the decision making process. A detailed presentation on the topic of questionnaire design is well beyond the scope of this article. One fact is certain however; anyone can write a survey but not everyone can develop a good survey. Problems associated with "leading" questions, inappropriate wording, sensitive questions, length of the survey, and errors of omission can easily render the results useless. The purchaser should require evidence of the supplier's ability before the contract is signed. The best evidence would include both formal training in questionnaire design and experience.

Major considerations in the selection of the survey type deal with the cost of the survey and the quality and quantity of the information gathered. The mail survey is the least expensive approach. The major cost components include designing the questionnaire, obtaining the mailing list, analyzing the data and developing the final report. Generally, these costs can be expected to run between $8,000.00 and $14,000.00 or more depending upon the number of respondents and the length and complexity of the survey. The costs for duplication, envelopes, stuffing, delivery and return postage, and remailing are often relatively small, as surveys go. Assuming a survey with 75 questions, an initial mailing of 4,000 pieces, one remailing and a 20% response rate, costs in the range of $6,000.00 to $8,000.00 might be expected. The total cost might range from $14,000.00 to $22,000.00 depending, once again, on the number of respondents and the length and complexity of the survey.

A drawback of mail surveys is the traditionally low response rate. The goal of a survey project is to obtain a representative sample from the population of interest, such as the potential consumers of a product. The low response rate can cast considerable doubt on the representativeness of the sample and, therefore, on the results of the survey effort. This is due to a possible bias created by the large number of nonrespondents. This is not to say that mail surveys have not achieved high response rates. Efforts dealing with highly emotional issues and extremely interested populations have achieved response rates near 100%. Most marketing problems, however, would not be considered highly emotional issues by the public nor would they be expected to be extremely interested. The fact is, response rates are traditionally lower for mail surveys than they are for the other types of surveys. In addition, the researcher has little or no ability to monitor the respondents' efforts as the survey is being completed.

Telephone surveys represent the mid-range in terms of cost and quantity and quality of information obtained. More and better information can be gathered through the use of open ended or discussion type questions when you are talking directly to the respondent as the survey is being completed. Questions that some respondents find confusing can be clarified by the telephone interviewer. The respondents will be more likely to answer the questions that the researcher intended to ask rather than a misinterpretation of the question. This type of survey also has a higher response rate compared to the mail effort. This greatly decreases the likelihood of a nonrespondent bias and allows the purchaser and supplier to put much more faith in the research results.

With regard to costs, the telephone effort will cost more than the mail survey. Assuming the same survey as above with 800 respondents (4000 mailings x 20% response rate = 800), the initial cost of questionnaire design, obtaining the list, data analysis and developing the report should be about the same. The cost of completing the 800 surveys would be much higher, however. The major cost components include telephone time, telephone interviewer salaries and supervision of the interviewers. Assuming that the survey takes 20 minutes, with an average of 1.25 surveys completed per hour, it would take approximately 640 hours of interviewer time. At $5.00 per hour that would be $3,200.00.

The supervisor is responsible for monitoring completions, numbers to be called back and when to call them, sequencing the phone calls, arranging the interviewer work schedules, and keeping the interviewers supplied with numbers. On a national survey the work day will run from 8:30 or 9:00 a.m. until 11:00 or 11:30 p.m., or easily 60 hours per week. Assuming a pay rate of $7.50 per hour, four weeks of interviewing and one week for organization and clean-up, this will add an additional $2,250.00. The telephone costs for 1.25 surveys per interviewer hour would include 25 minutes for the completed surveys and another 15 minutes for arranging callback times and verifying phone numbers. Assuming an average rate of 35 cents per minute, 40 minutes per hour and 640 interviewer hours, the phone charges

Continued on page 12.

would run approximately $8,960.00. The total cost for the telephone time, interviewer and supervisor would be $14,410.00. The total cost of the project could be expected to run from $22,500.00 to $28,500.00.

In the case of both the mail survey and the telephone interview only the immediate out of pocket costs have been considered. An overhead charge of 20 to 40 percent would be expected. There is also an expectation on the part of all business owners that their efforts be rewarded in the form of profit. This would require an additional 10 to 20 percent be added to the cost of the project. This would place the cost of the mail survey between $18,000.00 and $35,000.00 and the telephone interview between $29,000.00 and $45,000.00 for the example discussed above.

The personal interview approach allows for not only voice, but also visual contact. The interviewer is able to record not only the spoken messages but also those sent by body language and an observation of the respondent's home environment. The benefits of the approach are numerous. The problem, as expected, is cost. An advertisement in the *American Marketing Association's Director of Members and Marketing Services Guide* boasts of its low cost of only $1.10 per question per respondent. This represents a cost of $66,000.00 which does not include the cost of questionnaire development and assumes we require no qualifications of our sample such as age, income or sex.

The last method to be presented here is the focus group interview. In this approach, anywhere from 3 to 10 groups of 8 to 14 people are gathered in an informal setting and a moderator presents them with a topic for discussion. These people are, most often, qualified by age, sex, and a number of other characteristics dictated by the question under analysis. The moderator guides the discussion with only the topic of concern and questions that direct the discussion and maintain focus. A considerable depth of analysis can be achieved with this approach. Important product concerns or benefits unanticipated by the researchers can be explored in depth as well as predetermined topics associated with the research question. The cost of this effort generally runs from $3,000.00 to $6,000.00 or more per group. A five group focus group effort would run anywhere from $15,000.00 to $30,000.00 depending upon the number of qualifying conditions for the respondents.

Although the focus group approach continued to gain popularity, its limitations must be recognized. With total sample sizes of generally 50 to 100 respondents, the ability to achieve a statistically significant representation of the total population of prospective consumers is doubtful. This issue of statistical representation will be discussed more thoroughly later in this article. The proper role of this approach is to provide a better understanding of the problem situation. This would become the basis for developing a survey or experimental design, not the final results on which to base the problem solution.

Collection of Problem Specific Data

The next stage of the research process is the data collection stage. This step includes the selection of the sample and the execution of the research design developed in the previous stage. While this may appear to be a simple and straight forward step, there are a number of concerns that must be dealt with. These include how the sample is selected, how the research design is executed and by whom.

There are some cases when all members of the population under consideration can be included in the research effort. This is known as a census of the population. Such a case may be when the firm wishes to identify the marketing efforts of its competitors and there are only five or six of them. Most often, however, this is not the case. Normally market research attempts to discover the characteristics of fairly large populations and, therefore, must resort to measuring only a sample from the population. There are two basic sampling methods; probability and nonprobability samples. In a probability sample the selection of population members included in the sample is determined by chance and not left up to the discretion of the researcher. When this is the case, it is more likely that the sample will be representative of the population. In a nonprobability sample, the researcher determines the members of the sample. In this case, the representativeness of the sample is in question and the results of the research project must be interpreted with caution.

With regard to the execution of the research design, it is necessary to carry out the project exactly as it has been designed. Substitution of procedures or sample members according to individual discretion will impair the reliability of the results. If at all possible, trained and experienced interviewers and supervisors should be utilized. The research project should be handled by a trained, experienced, and capable team of researchers. It should not be a guinea pig for the novice researcher.

Data Analysis

The fifth stage of the research process is the data analysis stage. At this point the various bits of data collected are converted to meaningful information. Most often, this conversion requires the use of quantitative or qualitative analysis procedures. The proper use of these procedures requires extensive technical expertise. There are no techniques that are appropriate for all forms of data. The researcher must be able to determine which techniques are appropriate for analyzing the data collected in the previous stage.

Recommendations

Recommendations are made during the last stage of the market research process. The data analysis will be summarized and presented to the purchaser. The findings, and their significance, should be explained to him. In addition, the supplier should make recommendations as to how the purchaser might implement these findings. It must be reemphasized that the supplier does not make a decision for the purchaser! This is the job of the purchaser's management personnel.

The preceding paragraphs represent a general description of the market research process. Some projects may attempt to discover the problems which plague firms. Others may attempt to identify the most appropriate courses of action. Still others may attempt to measure the effectiveness of past marketing efforts. Whatever the objective of the research effort, a vast majority should follow a sequence of events that approximates this type of a process.

Characteristics of "Good" Market Research

There are many suppliers of market research, both internal and external to the firm. One does not have to go far to find a firm that is eager to supply your research needs. The crucial question is whether or not it is good market research. How does one identify good research? It will possess certain characteristics with which the purchaser should be familiar. The good market research will be methodical, thorough and objective in nature.

Methodical

The methodical nature of good market research means

that it will employ market research methods which have proven to be reliable and effective. Proof is based on testing and scrutiny over time. They should be both intuitively and statistically sound. The foremost methodology that should be utilized is the scientific approach to problem solving. This is the essence of the market research process presented earlier. Further evidence of being methodical is the use of accepted sampling procedures. In a vast majority of cases, a probability based sample is the preferred approach. These types of samples afford more confidence in the inference of sample information to the population of interest. As stated earlier, the use of nonprobability samples violates a number of assumptions required for statistical inference.

Finally, the methodical nature of good research is evidenced by the employment of appropriate analysis techniques. Although a discussion of these techniques is beyond the scope of this article, let it suffice to say that each analysis procedure is based upon a number of assumptions regarding the nature of the sample data and the population from which it is drawn. Some of these assumptions are much more tolerant to violation than others, however, significant violations can render the analysis procedure inappropriate and the use of appropriate techniques is vital to good research.

Thoroughness

Good market research is also thorough. Thoroughness means that all relevant and feasible data is utilized in the quest for an answer to the research question. This implies that an accurate identification of the population of interest be made. It further implies that samples of sufficient size be used in order to have greater confidence in the research findings. In this area, the laws of statistics can be of great benefit. A standard statement of confidence in the inferences drawn from the sample might be: there is a 95 percent level of confidence that the characteristics of the sample are within 5 percent of the population's actual values. In this case, assuming a probability sample is employed and the research question has only two possible responses (yes or no), a sample size of 385 is required. This is true whether the population contains 10,000 or 1,000,000 members. As a general rule of thumb 400 is a comfortable sample size under these conditions. Assuming a desire to maintain a 5 percent margin of error, a sample size of 100 will result in a confidence level of 68 percent, 84 percent at 200, 91.5 percent at 300, 97.5 percent at 500, and 99.1 percent at 700. It becomes quite clear that higher and higher levels of confidence become quite costly to achieve.

Assume that, via a probability sample, 400 people were asked if they liked a particular product and 10 percent answered yes. Also assume that they were asked if their income was above or below $20,000.00. If it is desirable to know the income characteristics of the entire sample, one can be 95 percent confident that the sample results are within 5 percent of the population's actual value. If, on the other hand, it is desirable to know the income characteristics of only those who like the particular product, a sample size of only 40 has been drawn from the population of people who like the product. Now there is only 50 percent confidence that the sample results are within 5 percent of the actual population value. In short, the chances that the results are within 5 percent of the population's true value is about the same as a flip of a coin.

The cost of information increases as more detailed information is required. Assume that, rather than a dichotomous above or below $20,000.00 income classification, it is desirable to divide the sample into five categories. Now the sample size requirements for a 95 percent confidence level with a 5 percent tolerance for error increases to about 650. Examination of only those who are interested in the product drops the confidence level to dismal levels. From these simple examples, it is easy to see that the sample size is a critical determinant of the faith placed in the survey results. Two critical questions that the purchaser must answer are: How much error can I stand and how much can I afford?

Thoroughness also implies that time and care is taken in the identification of the problem and development and execution of the research design. Once again, the use of the market research process facilitates the attainment of this goal. The explicit identification of the research project's rate of progress through these stages helps to slow one down and make a thoughtful consideration of what is known and the information gaps which exist.

Objectivity

The last characteristic of good research to be dealt with here is objectivity. The goal of market research is to provide good information for the decision making process. Identifying and communicating the true state of affairs as it pertains to the research question is good information. The supplier should not attempt to prove anyone's preconceived notions of what the world is like or what they think the answer to the research question "should" be. If this type of research is desired, one can construct a survey containing loaded or leading questions and the respondents will answer with the desired responses. A researcher who wants to identify the true state of affairs must use fair, unbiased questions in the survey. Problems can often arise since the difference between the two are often subtle in nature.

In addition to the execution of market research, objectivity is also an issue for consideration in the use, or misuse, of the results. If the research project has been executed in a manner consistent with the previously mentioned considerations of objectivity, thoroughness and a methodical approach, the results will more than likely be an accurate answer to the research question. If the results are supportive of the purchaser's marketing plans and strategies, that's nice since all involved are likely to be very happy. If it suggests that plans and strategies are seriously flawed, then so be it, even at the risk of offending someone's pet project or the risk of losing repeat research business.

In general, you get what you pay for! If you try to cut corners, you are likely to pay for it in terms of decreased reliability of the research findings. A research "bargain" is no good if it doesn't answer your research questions or if the results are dubious. If a supplier claims to have all the answers run, don't walk, away from him since it is very likely that more harm than good will result.

Part II—"The Role of Purchaser and Supplier" will appear in the December issue of the Business Review.

SOUTH DAKOTA INCOME AND EMPLOYMENT

TOTAL PERSONAL INCOME
United States, Plains Region and States
First Quarter 1987--First Quarter 1988
(Millions of Dollars, Seasonally Adjusted at Annual Rates)

	1987 1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	1988 1st Qtr.	% Change 1st Qtr. 1987 1st Qtr. 1988
United States	3,652,506	3,688,316	3,749,283	3,855,169	3,884,290	6.3
Plains States	256,290	253,036	254,895	272,041	268,780	4.9
Iowa	40,295	38,450	38,561	43,962	42,126	4.5
Kansas	36,503	36,606	36,632	38,404	38,612	5.8
Minnesota	66,108	65,582	66,754	69,989	69,401	5.0
Missouri	72,930	73,215	74,101	76,198	76,537	4.9
Nebraska	22,669	21,926	21,903	24,861	23,359	3.0
North Dakota	9,019	8,681	8,321	9,062	9,431	4.6
South Dakota	8,765	8,576	8,622	9,565	9,315	6.3

Note: Detail may not add to totals because of rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

SOUTH DAKOTA NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT
June 1987 and June 1988
(In Thousands)

	June 1987	June 1988	% Change	Average Weekly Hours: June 1987	Average Weekly Hours: June 1988	Average Hourly Earnings: June 1987	Average Hourly Earnings: June 1988
Total Employment	261.3	266.0	1.8				
Total Private	199.9	204.9	2.5	34.5	34.8	$7.14	$7.16
Mining	2.7	2.6	-3.7	43.2	43.6	12.06	12.06
Construction	11.2	11.6	3.6	39.7	42.2	9.47	9.56
Manufacturing	27.9	30.3	8.6	42.2	42.5	7.93	7.86
Durable Goods	16.0	17.0	6.3				
Fabricated Metals & Mach.	9.6	10.5	9.4				
Nondurable Goods	11.9	13.3	11.8				
Food & Kindred Products	6.4	7.9	23.4				
Paper, Printing & Publishing	2.7	2.7	0.0				
Transportation & Pub. Utilities	12.1	12.5	3.3	39.3	38.9	10.19	10.05
Transportation	7.0	7.3	4.3				
Communication	2.8	3.0	7.1				
Electric/Gas/Sanitary Services	2.3	2.3	0.0				
Wholesale & Retail Trade	68.8	69.4	0.9	33.4	32.6	6.20	6.10
Wholesale Trade	17.0	17.0	0.0				
Durable Goods	7.6	7.6	0.0				
Nondurable Goods	9.4	9.4	0.0				
Retail Trade	51.9	52.4	1.0				
Finance, Insurance & Real Estate	14.6	14.7	0.7	35.7	36.1	7.03	7.08
Services	62.7	63.8	1.8	30.2	31.1	6.38	6.46
Hotels, Amuse., Pers. & Business	18.5	19.3	4.3				
Medical & Health	23.8	24.0	0.8				
Educational	3.7	3.8	2.7				
Social	4.1	4.3	4.9				
Membership	8.9	8.7	-2.2				
Government	61.4	61.1	-0.5				
Federal	11.0	10.7	-2.7				
State	16.5	16.1	-2.4				
State Education	5.5	5.5	0.0				
Local	33.9	34.3	1.2				
Local Education	18.7	18.8	0.5				

Source: South Dakota Department of Labor

For further information contact Nancy Nelson

SOUTH DAKOTA AGRICULTURAL INDICATORS

CROP PRODUCTION SUMMARY
SOUTH DAKOTA
August 1, 1988
(1,000'S)

Crop	Unit	1987	Production 1988
Wheat, All	Bu.	106,704	40,684
Winter	Bu.	55,080	21,600
Durum	Bu.	3,024	884
Other Spring	Bu.	48,600	18,200
Corn-Grain	Bu.	228,250	101,250
Oats	Bu.	52,900	17,600
Barley	Bu.	34,000	10,000
Sorghum, Grain	Bu.	14,310	9,360
Soybeans	Bu.	45,175	30,600
Hay, All	Tons	7,090	5,750
Alfalfa	Tons	5,170	3,450
All Other	Tons	1,920	2,300

Source: South Dakota Crop & Livestock Reporter

PRICES RECEIVED BY FARMERS FOR COMMODITIES SOLD--SOUTH DAKOTA
JUNE 1987 and 1988

		Base Period Price 1910-1914 Average	June 1987	June 1988	June 1988 Price as % of Base	June 1988 Price Above or Below June 1987
Wheat	Bu.	.85	2.51	3.26	384	29.9
Corn	Bu.	.51	1.61	2.34	459	45.3
Oats	Bu.	.35	1.51	2.88	823	90.7
Barley	Bu.	.59	1.59	2.99	507	88.1
Flaxseed	Bu.	1.68	3.49	2/		
Milk, Whsl.	Cwt.	1.82	1/	1/		
Eggs	Doz.	0.196	1/	1/		
Cattle	Cwt.	5.24	57.60	58.90	1124	2.3
Calves	Cwt.	6.08	77.90	88.50	1456	13.6
Hogs	Cwt.	7.07	59.00	46.00	651	-22.0
Sheep	Cwt.	4.34	26.80	23.70	559	-11.6
Lambs	Cwt.	5.66	83.30	59.40	1050	-28.7
Wool	Lb.	0.178	0.91	1.43	803	57.1

1/ Season average price only. 2/ Not published.

Source: South Dakota Crop & Livestock Reporter.

SOUTH DAKOTA LOCAL CONDITIONS INDICATORS

(% Change Like Period Previous Yr.)

City	Total	Taxable Sales/1 Retail	Services	Telephone Services/2	Housing Starts/3	Postal Indicator/4	Employment*
Aberdeen	4.5	0.5	6.2	3.6	-5.7	48.5	4.1
Belle Fourche	-3.3	-1.7	-6.5	1.3			-3.1
Brookings	9.6	9.9	15.8		-86.3	17.3	4.4
Canton	1.2	-8.5	20.8	0.0			2.7
Chamberlain	9.8	6.3	3.5	2.9			-.2
Deadwood	1.6	-6.2	22.8	2.3			4.4
De Smet	3.8	4.4	29.4	-0.9			-2.7
Elk Point	4.4	3.1	10.0	1.8			7.2
Hot Springs	4.9	0.5	24.7				7.2
Huron	-.4	6.3	-21.3	1.5	-76.6	21.4	1.9
Lead	50.0	9.6	46.7	-0.3			4.4
Madison	9.7	12.1	9.9	1.8	-40.6		13.5
Milbank	1.8	-3.0	-6.0	0.1	28.4		.6
Mitchell	6.8	6.1	6.6	1.1	-75.2	20.7	3.5
Mobridge	11.6	6.0	22.6	-0.6			1.3
Pierre	6.7	5.3	16.3	2.7	-78.4	9.8	5.8
Rapid City	5.7	2.8	5.2	2.1	-25.6	64.6	5.0
Sioux Falls	11.0	8.0	16.5	3.5	48.3	41.3	1.2
Spearfish	4.2	0.0	11.9		10.1		4.4
Sturgis	-2.9	0.1	8.9	1.4			2.8
Vermillion	11.9	10.0	13.9	1.0			2.6
Watertown	14.5	10.1	22.3	2.6	-15.6	15.3	6.3
Winner	6.5	7.2	16.0	1.7			1.9
Yankton	7.0	5.1	11.3	4.4	-49.2	14.5	3.9

*Based on County Data

1/Percentage change for May-June 1987 and 1988.

2/Percentage change for June 1987 and 1988. Telephone data are for the number of access lines in servic

3/Percentage change for January-June 1987 and 1988. Data reported for housing represent the value of housing starts.

4/Percentage change for the second quarter of 1987 and 1988. Included in postal indicators are: postag sales, postage meters for customers, meter imprint postage (3rd class regular), and second class post

SOUTH DAKOTA Business Review

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CONSUMER PRICE INDEX
United States
Jan.-June 1988
(1982-1984=100)

Item	Jan.	Feb.	March	April	May	June	Unadjusted % Change Jan-June
All Items	115.7	116.0	116.5	117.1	117.5	118.0	2.0
Food & beverages	115.7	115.8	116.0	116.7	117.1	117.6	1.6
Food	115.7	115.7	115.9	116.6	117.0	117.6	1.6
Alcoholic beverages	115.8	116.8	117.4	118.0	118.2	118.7	2.5
Housing	116.2	116.6	117.0	117.3	117.7	118.6	2.1
Shelter	124.6	125.0	125.6	125.8	126.2	126.6	1.6
Renters' costs	130.8	131.3	132.9	132.9	133.1	133.7	2.2
Homeowners' costs	128.5	129.0	129.2	129.4	129.9	130.4	1.5
Fuel & other utilities	102.4	102.8	102.7	102.8	103.5	105.9	3.4
Fuel	95.6	96.0	95.8	95.7	96.5	100.8	5.4
Fuel oil, coal & btld. gas	80.8	80.9	80.5	80.2	80.0	79.1	-2.1
Gas (piped) & electricity	101.5	101.9	101.7	101.6	102.6	107.8	6.2
Other util. & Pub. Services	121.3	121.8	121.7	122.3	122.6	122.3	0.8
Household furn. & operation	107.5	107.7	108.3	109.1	109.3	109.6	2.0
Apparel & upkeep	110.4	110.2	114.3	117.0	116.3	114.6	3.8
Transportation	107.1	106.8	106.5	107.2	108.1	108.5	1.3
Private transportation	106.0	105.7	105.4	106.0	107.0	107.4	1.3
Public transportation	121.8	120.8	121.4	122.4	122.4	123.2	1.1
Medical care	134.4	135.5	136.3	136.9	137.5	138.2	2.8
Entertainment	118.1	118.3	119.0	119.6	119.7	120.1	1.7
Other goods and services	133.4	134.2	134.6	134.8	135.1	135.5	1.6

*Consumer Price Index for all Urban Consumers

Source: Bureau of Labor Statistics, U.S. Dept. of Labor

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